

# THE JOURNAL OF LAND & PUBLIC UTILITY ECONOMICS



## COMMERCIAL VEHICLES ON FREE HIGHWAYS

T. H. MacDONALD

## LARGE LAND HOLDINGS IN NORTH DAKOTA

ALVA H. BENTON

## INFLUENCE OF CUSTOMER OWNERSHIP ON UTILITY FINANCIAL STRUCTURE

HENRY P. BRUNER

## INCREMENTS IN LAND VALUES IN PHILADELPHIA

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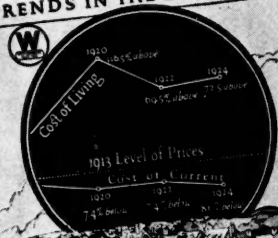
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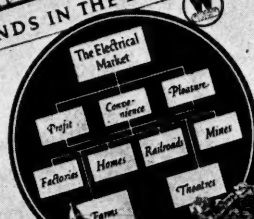
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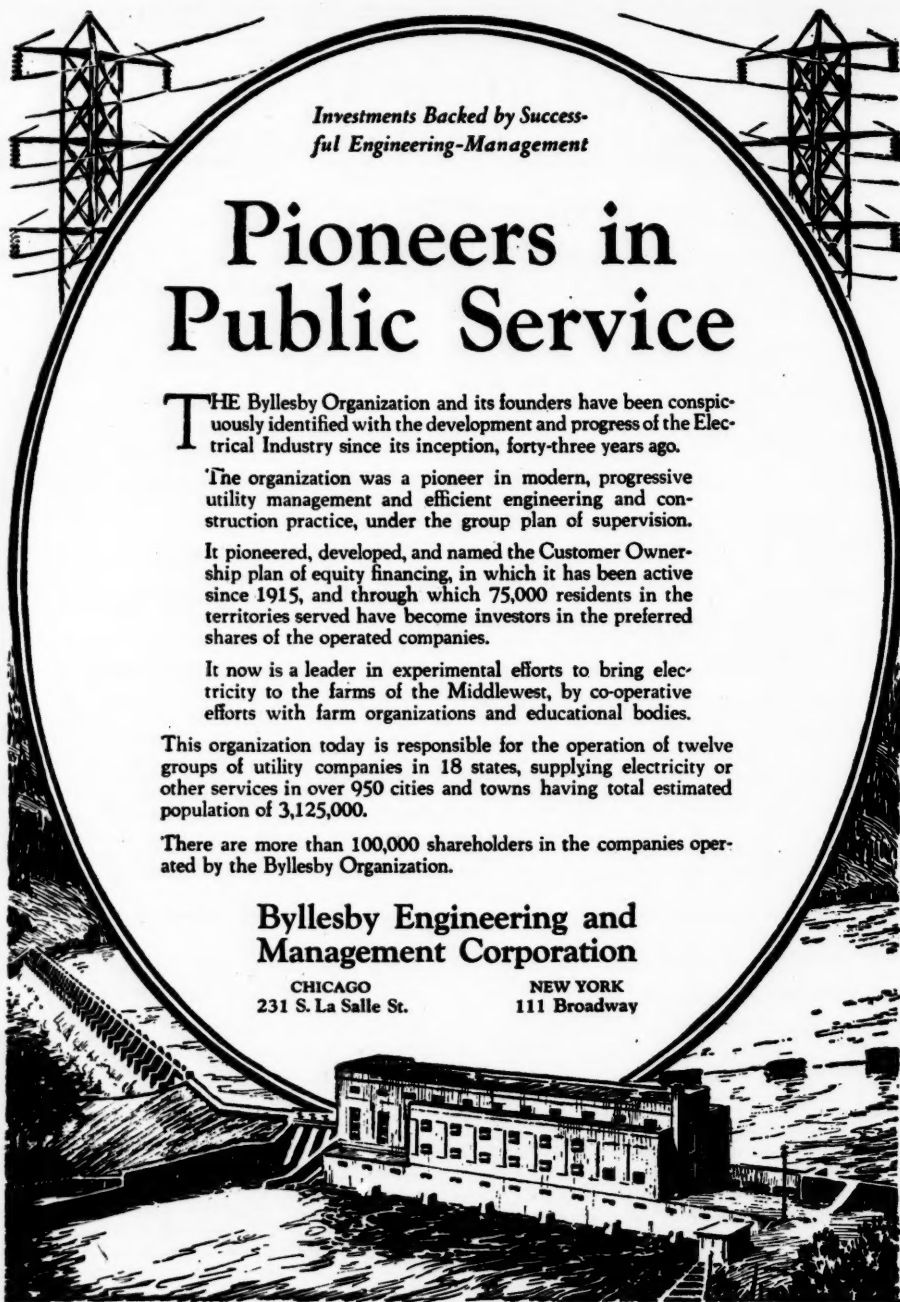
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# THE JOURNAL OF LAND & PUBLIC UTILITY ECONOMICS

OCTOBER  
1925



VOLUME I  
NUMBER 4

## COMMERCIAL VEHICLES ON FREE HIGHWAYS

By T. H. MacDONALD

FROM the early days of the Republic to the dawn of the present century the principal roads of the United States were toll roads, or turnpikes. All persons using them paid for the privilege at the time of use. There were, of course, many roads of local importance only which were repaired with public funds or with tax labor, but these, in the main, were unsurfaced earth roads. Practically all roads improved by surfacing were financed by tolls collected either by companies or by units of government. So universal was this method that the verb *to turnpike*, coined from the noun which originally signified only the gate used to stop travelers on the toll roads, was used practically as a synonym for *to improve*.

Our people will never again submit to a method of collecting revenue for highway improvement which requires the traveler to halt on his journey and pay a toll as the price of proceeding. But because we do not pay for the use

of the roads at the moment of use as we did in the turnpike days is no reason for assuming that we no longer pay for the roads.

No one who has followed the development of the gasoline tax as it has been adopted by one state after another until now when it is collected in 44 states and the District of Columbia; no one who has observed the tendency to increase the rate of this tax once it has been adopted; and certainly, no one who has paid the tax at the rate of 2, 3, or 4 cents for every gallon of gasoline consumed by an automobile or motor truck can be deluded into the belief that the use of the highways is free. The gasoline tax differs nowise in principle from the turnpike toll; and the motor-vehicle license fee as it is collected and applied is scarcely distinguishable from it. Together these two methods of taxation yielded in the United States a total of more than \$300,000,000 in 1924, or more than the whole annual expenditure

for highway improvement and maintenance in the entire country prior to 1919. This sum and an additional sum of \$158,014,709 paid to the Federal Government as excise taxes on automobiles, motor trucks, and parts for these vehicles, were paid directly by the owners of motor vehicles into the public treasuries, and, with the exception of the latter, the payments were made for the privilege of owning and operating vehicles over the public roads. These motor-vehicle owners, moreover, now number upwards of 15,000,000 in all probability, and certainly they constitute, as a class, a large proportion of the tax-paying public which contributed last year the balance of the billion dollars of highway revenue that was not collected directly from them as motor-vehicle owners. The owners of motor trucks or commercial vehicles paid proportionately more than the average owner of a motor vehicle, since their license fees are higher than the fees charged for passenger cars in nearly all states and their consumption of gasoline is greater.

So when we speak of "free highways" for commercial vehicles we must be sure that our meaning is made perfectly clear. We cannot mean that the use of the highways is entirely free to any commercial vehicle. We mean merely that the owners of commercial vehicles, and especially those owners engaged in the business of transport as common carriers, do not themselves pay the entire cost of constructing and maintaining the highways they use out of their revenues as the railway companies pay for their tracks; and we imply, therefore, that the rates charged for the service of the vehicles are not based upon a complete payment for the use of the roads. Compared with other users of the highways, the owners of commer-

cial vehicles pay a greater sum per vehicle for their use. It is only by comparison with the railways, if at all, that they may be said to enjoy a relatively free use.

### *Volume and Classification of Highway Traffic*

It will be well at this point to look, first, into the usage of our highways, to see who is using them, what kinds of vehicles are operated over them and the relative numbers of each kind, what are the highway requirements of the various types of vehicles; and then to ascertain the sources from which funds are obtained for the building and repair of the highways.

Broadly speaking, we know that at the end of 1924 there were registered in the several states 17,591,981 motor vehicles of which 15,371,570 were passenger cars, 2,131,332 were motor trucks, and 89,079 were taxis, busses, and cars for hire. These vehicles are operated over the rural highways and the city streets. It will be noted that the number of passenger cars is approximately seven times as great as the number of motor trucks, taxis, busses, and cars for hire, but, from evidence obtained by the Bureau of Public Roads in its transportation surveys in several states, it appears probable that the utilization of the rural highways by passenger cars is more than seven times as great as the utilization by motor trucks. Comparing the operation of trucks and passenger cars, it appears that a greater percentage of the operation of the former than of the latter is over city streets.

There are a number of evidences of this. For example, the Bureau's Maine survey<sup>1</sup> showed that the traffic of trucks

<sup>1</sup> "The Maine Highway Transportation Survey," *Public Roads*, Vol. VI, p. 45. (May, 1925).

on the rural highways increased from 1916 to 1924 at a slower rate than the registration of trucks, while passenger-car traffic increased at a greater rate than passenger-car registration. The same survey showed an average daily utilization of the highways of the state, between July and November, 1924, amounting to 2,904,000 vehicle-miles for passenger cars and 283,000 vehicle-miles for motor trucks, a ratio of approximately 10 to 1, whereas the registration of the two classes of vehicles in the state was approximately as 6 to 1. Similar indications in other states in which intensive studies have been made confirm the conclusion that the relative utilization of the rural highways by passenger cars as compared with motor trucks is generally even greater than the ratio of the registration of the two classes of vehicles, and it is not far from the truth to say that the use of the highways by passenger vehicles is 10 times as great as their use by motor trucks.

This fact is adduced merely to show that improved highways are demanded for other purposes than for the operation of commercial vehicles, although it is patent without proof that there would be practically as great a demand for highway improvement as there is now if there were no motor trucks at all. However, since the fact has been brought out, it may be well to mention in passing that the records of the 29 states which segregate license receipts from passenger cars and motor trucks show that the motor trucks, which in those states constitute 13% of the total number of trucks and passenger cars, pay 24% of the total license receipts.

However, the point that must be made clear is that improved roads are needed and demanded by the owners of the more than 15,000,000 passenger cars, and a form of improvement adequate

for these vehicles would be required even if there were no motor trucks or commercial vehicles. The passenger cars are so numerous that there is one for nearly every family in the United States. So long as the roads required for these vehicles are paid for by the public, therefore, it makes little difference whether the necessary revenues are raised by taxation levied upon the vehicles or upon any other basis. The cost in any case would be paid by practically the same group, since the owners of passenger cars constitute the great proportion of the tax-paying public. Moreover, it is indisputable that the owners of these vehicles should pay for the roads that they demand and require. The only point in question is whether the owners of commercial vehicles using roads for which they pay only in part are thereby subsidized to the extent that the public, or—almost synonymously—the whole group of motor-vehicle owners, assists in the payment; and whether these owners of commercial motor vehicles are thus given an unfair advantage in competition with the railways and other commercial carriers. That is what the problem comes down to.

#### *Effect of Truck Traffic on Character of Road Improvements*

Now, it is a fact that while the improvement of highways would be demanded on as great a scale as that which obtains if there were no motor trucks in existence, still the character of the improvement is influenced by the existence and operation of the trucks. Passenger cars with their human burden rarely exceed 3 tons in weight. The great majority weigh less than 2 tons. Practically all of them are equipped with pneumatic tires, and they travel at a customary maximum speed of about

35 miles an hour. The highest degree of improvement required by the passenger traffic, therefore, is a road paved with a surface that will withstand the static load and impact of a 3-ton vehicle equipped with pneumatic tires, and smooth enough to be reasonably comfortable for travel at 35 miles an hour. As nearly as can be determined, this would call for the equivalent of a concrete pavement with an average thickness of 6 inches. Of course, I do not mean to say that a road of this character would necessarily be built wherever passenger automobiles are used. The extent of the maximum improvement naturally depends upon the occurrence of traffic of sufficient density to warrant the necessary expenditure.

As to the motor trucks, their maximum weight is limited by law in all states, the restrictions varying from 8 to 15 tons. The trucks in use range from those which have a carrying capacity of  $\frac{1}{2}$  ton up to those built to carry 7 tons. Very few trucks are in use which are designed to carry more than 7 tons, and the number of 7-ton trucks is very small. On all roads the bulk of the motor-truck traffic is found to consist of vehicles having a carrying capacity of from  $\frac{1}{2}$  to  $1\frac{1}{2}$  tons; but nearly all roads are used occasionally by 5-ton trucks, and in certain sections, especially near the larger cities, such heavy trucks form a considerable percentage of the total traffic.

The truck traffic on the state highways of Connecticut may be taken as typical of the most severe condition that has to be met. That traffic, as shown by the state-wide survey<sup>2</sup> made by the Bureau of Public Roads, consists of the various sizes of trucks in the following percentages:  $\frac{1}{2}$  to  $1\frac{1}{2}$  tons, 64.7%;

2 to  $2\frac{1}{2}$  tons, 14.3%; 3 to 4 tons, 9.9%; 5 to  $5\frac{1}{2}$  tons, 10.5%; and  $6\frac{1}{2}$  to  $7\frac{1}{2}$  tons, 0.6%. The tonnages refer to the carrying capacity of the vehicles, which average about 2 tons. The gross weight when fully loaded will, in each case, be more than twice the load capacity, except as limited by the state law which fixes a maximum limitation of 25,000 pounds. It will be seen, therefore, that in this state where truck traffic is as heavy as will generally be found anywhere, about 80% of the vehicles will not exceed 6 tons in gross weight, and 90% will not exceed 8 tons. Ten per cent of the total number may weigh as much as 10 tons and a few may equal and in rare cases exceed the maximum legal weight of  $12\frac{1}{2}$  tons. A considerable proportion of the lighter vehicles are equipped with pneumatic tires, but practically all of the heavier ones have solid rubber tires; and their speed rarely exceeds 25 or 30 miles an hour and generally is less.

A popular idea exists that such traffic is highly destructive and necessarily so. It was implanted in the public mind during the World War when roads which had been built for lighter vehicles were destroyed by the heavy trucks which were put into service by the Army. What happened is inevitable whenever a light-duty road or other structure is called upon to perform heavy duty.

Roads can be built to carry vehicles of any weight, heavy or light; and so long as the designed load is not exceeded there will be no destruction. Roads will wear out as steel rails, and motor trucks, and rubber tires wear out. But they will not be destroyed; and whether the relatively heavy loads be few or many there will be no appreciable difference in the rate of wear.

The first essential is to fix the maximum vehicular weight. That has been

<sup>2</sup> "Connecticut Highway Transportation Survey," *Public Roads*, Vol. V, p. 10. (March, 1924).



done by law in all states. The next is to build the roads to carry the maximum load. That is being done. The third is to enforce the legal weight restrictions. Where these three essentials are properly observed, there will be no destruction; and the only appreciable result of an increase in the design load will be an increase in the cost of construction.

*Additional Highway Costs Attributable to Truck Traffic*

For such traffic as the Connecticut truck traffic described above, several types of pavement will give practically equal service. A suitably designed brick pavement, or bituminous concrete pavement, or a concrete surface might be used. For purposes of comparison it will be assumed that the choice is concrete. In that case a pavement 7 inches thick at the center, thickened to 9 inches at the edges, would in all probability carry the traffic safely. The average thickness of such a pavement would be somewhat less than 8 inches; but let us say that it would be 8 inches. Then, compared with the pavement required for dense passenger-car traffic only, such a pavement would have an extra thickness of about 2 inches of concrete—an extra cost of, say, \$10,000 a mile. Roughly, that is the measure of the additional cost of building for heavy-truck traffic.

Whether or not the additional cost is justified is a comparatively simple problem in economics. The use of heavy trucks is not imperative. Freight can be moved over the highways in one-ton trucks, which are no heavier than the larger passenger cars. A large proportion of the tonnage in Connecticut and everywhere else is actually carried in such vehicles. But there is a very decided operating economy in the use of

the larger units. Where there is a sufficient volume of freight to be moved and full loads can be provided for the heavier trucks, the cost of the haulage can be considerably reduced. Whether or not to build the road to accommodate the heavier vehicles is then simply a question of the number of such vehicles to be operated. If they are numerous enough, the combined savings in operating cost of the vehicles will more than offset the additional cost of the road and it will be economical to expend the larger sum for the road.

Obviously the employment of this method implies that only certain roads will be built as heavy-truck roads. That means a classification and building of roads according to duty; and it means also a restriction of heavy trucks to operation over heavy-duty roads. Such a classification is already in practical effect in those states where the traffic requires it; and the restriction of the heavy traffic presents no practical difficulty. It takes care of itself. Heavy trucks can be operated economically only between points at which they can take on a full load. Between such centers, heavy-duty roads are generally justified by the traffic. It is rarely necessary to prohibit operation of the heavy trucks over by-roads, because there is rarely any occasion for the heavy trucks to turn into such roads. When the highways are properly classified, economic law accomplishes the restriction of the heavy traffic to the heavy-duty roads and leaves very little for statutory laws to regulate.

*The Problem Restated*

Summing up, then, I think it is evident that: (1) there would be a demand for improved roads whether commercial vehicles were operated over them or

not; (2) as a general rule the passenger-car traffic is at least 10 times as great as the motor-truck traffic; (3) the roads required for the accommodation of the passenger-car traffic would be adequate for the transport of freight in one-ton trucks; (4) the use of larger units makes for more economical operation; (5) the heavy motor trucks do not destroy roads that are built to accommodate them; and (6) if the construction of the roads is properly related to the character of the traffic, the operation of the heavier truck units produces savings which more than offset the greater cost of the roads.

Now, from what has already been said it must be apparent that if any commercial vehicles are receiving free highway service or even a service that is relatively free, it can be only those commercial vehicles which exceed in weight the passenger cars for which improved roads must be built whether trucks move or not. These heavy vehicles do necessitate the building of more costly highways than would otherwise be required. For this additional service they pay higher license fees than the lighter vehicles' fees, which in some cases run to more than \$400 a year. But perhaps they do not pay enough, which is a supposition requiring careful analysis. At any rate no such contention will hold with respect to the light commercial vehicles which impose no greater burden upon the highways than the passenger cars. If these light commercial vehicles pay as much as the passenger cars of equal weight, they are paying as much as can reasonably be expected; and they do pay at least that much—all of them.

#### *Sources of Highway Revenue*

Before going into the question of whether or not the heavier trucks pay

as much as they should, let us first obtain some idea of the manner in which the cost of the roads is being met. Unfortunately the latest reasonably exact statistics with regard to the revenue obtained from various sources are those collected by the Bureau of Public Roads for 1921. These will no longer serve our purpose because of the great increase in motor-vehicle revenue that has occurred since that time. However, it is reasonably certain that the total revenue is now no greater than it was in 1921; we have definite information with regard to the amount of the motor-vehicle revenues; and a reasonably reliable estimate may be made of the other revenues. Table I presents data developed in this way for 1924 with the more exact 1921 statistics as a basis.

In this tabulation the motor vehicle is credited directly with the license fees that are paid for it and the taxes on the gasoline which it consumes. These two special taxes yield \$300,000,000, or one-third of the total highway revenue. But in addition to these direct taxes other taxes were paid on account of the motor vehicle, which do not appear here to its credit. For example, there are the federal excise taxes which in 1924 amounted to \$158,014,709, and which, since the tax was first levied in 1918,

TABLE I. APPROXIMATE HIGHWAY REVENUE, 1924  
(Exclusive of bonds)

Federal-aid and forest road funds .....	\$ 90,000,000*
Property taxes .....	415,000,000
Motor-vehicle license fees .....	225,000,000
Gasoline taxes .....	75,000,000
Miscellaneous taxes .....	95,000,000
Approximate total revenue derived by taxation....	\$900,000,000

\* This is the approximate expenditure during the year. As there are no federal taxes especially levied for road purposes, it is assumed that an amount of the total taxes equal to the road expenditure is raised for that purpose.



have produced more than twice as much revenue for the Federal Government as has been spent for federal-aid and forest roads. There are also the wheel taxes paid in some states; and the very considerable, though incalculable, property taxes, paid on the vehicles themselves and on the manufacturing plants, garages, agencies, and service stations which owe their existence to the use of the vehicles. Add all these taxes paid directly or indirectly *on account of* the motor vehicles and the total will certainly exceed \$500,000,000 for 1924, or more than half the highway revenue for the year, as shown in Table I.

Bear in mind that these are the taxes paid *on account of* the motor vehicle! Then recall that there are probably more than 15,000,000 motor-vehicle owners in the United States with a total population of 112,000,000, and it will be clear that the owners of motor vehicles, as previously remarked, constitute a very large percentage of the tax-paying class, and hence pay a large proportion of the highway tax that is not taken from them directly or indirectly *on account of* the motor vehicles. All of which means that already the improved roads of this country are being paid for in very large part by the owners of motor vehicles.

With this explanation, the statement that the owner of a light commercial vehicle is paying as much as can be expected when he pays at least as much toward the cost of constructing and maintaining the highways as the owner of a passenger car of equal weight, will readily receive credence. *Both together do not pay the cost of the roads.*

#### *Highway Costs Borne by Owners of Heavy Vehicles*

But what of the owners of the heavier vehicles? Are they paying sufficiently

for the special road service they require? It is evident that they are paying some amount in the form of license fees, some more in gasoline taxes, more still in federal excise taxes, still more in property taxes on their trucks and garages, and over and above all this the general property taxes which they pay along with all other property owners. Certainly they are paying something for their use of the roads. Their highway service is certainly not free; but do they pay enough?

This much can be said at once: They pay much more than they did 10 years ago. In 1914 the average license fee paid by owners of heavy trucks was but little higher than the fees paid by owners of passenger cars. In that year the average fee paid for a 1½-ton truck was only \$6.43. In 1924 the average fee paid for the same size of truck was \$31.15. For a 3½-ton truck in 1914 the average fee was \$8.36; in 1924 it was \$85.75. In other words, the 1924 fees for 1½-ton trucks were 485% of the 1914 fees; those for the 3½-ton trucks were 10 times as great as they were 10 years previously.

But the fees paid by owners of 5-ton trucks increased much more than either of these. The average truck of this size in 1914 paid only \$8.80 a year for its license to operate. Last year the average fee for the same size of truck was \$139.39, an increase of nearly 1,500%. In one state the fee for a truck of this size was over \$400 a year; in three other states the license to operate cost more than \$300; in four states the charge was between \$200 and \$300.

Clearly these heavier trucks were not sufficiently charged for their use of the roads in 1914; perhaps they are not paying enough now; but certainly they are paying a very considerable amount.

According to the registration statistics for 1924 there were 1,384,620 trucks of all sizes in the 29 states which classify their license receipts so that the amounts received from passenger cars and trucks can be segregated. These trucks paid license fees totaling \$29,211,455, or an average of \$21.10 per truck. In the same 29 states the 9,107,145 passenger cars registered paid \$93,269,171, or an average of \$10.24 per car. Taking all sizes of trucks together, it will be seen from these figures that the average truck paid in license fees more than twice as much as the average passenger car. It is not possible from available records to compare their gasoline taxes; but if it were, we should probably find a somewhat similar ratio.

In arriving at this average truck fee of \$21.10, however, we have included all sizes of trucks, the small with the large. Judging by the percentages of the various sizes of trucks manufactured, it is probable that about 80% of the vehicles included are trucks of the capacity of one ton or less. The fees paid by these vehicles probably do not exceed on the average the fees paid by the passenger vehicles; and, for reasons previously mentioned, there is no need that they should. Assuming that these vehicles which constitute 80% of the total number of trucks pay exactly as much as the passenger cars, that is, \$10.24, it follows that the remaining 20% of all motor trucks which have a gross weight of more than 3 tons pay an average fee of not less than \$64.50, or about 6.3 times as much as the light trucks. If this judgment be correct, and it cannot be far wrong, then the 20% of all trucks which have a gross weight in excess of 3 tons pay at least 60% of the total license fees paid by all trucks.

Let us see what this percentage would amount to in dollars and cents for 1924. As previously stated, the \$29,211,455 of motor-truck license fees received by 29 states were paid by 1,384,620 motor trucks. The total number of motor trucks registered was 2,131,332. Assuming that the fees paid by the trucks in the other 19 states and the District of Columbia average as much per truck as in the 29 states for which we have definite figures, it appears that the total of all license fees paid in 1924 by all trucks in the United States could not have been far from \$45,000,000. And, if 60% of this sum was paid by trucks of capacity greater than 1 ton or gross weight in excess of 3 tons, it follows that these trucks probably paid at least \$25,000,000 in license fees alone for their use of the roads. Whatever sums their owners pay in gasoline taxes, in excise taxes, and in property taxes on their trucks and garages would constitute an addition to this sum.

Now, it has been assumed that the construction of roads to accommodate these vehicles should add a maximum of \$10,000 a mile to the cost of the roads they use. If it be assumed that the life of such roads will be 20 years, then the \$25,000,000 paid in license fees is sufficient to pay \$10,000 a mile and interest at 5% on 33,000 miles of high-type pavement; and according to the best available estimates there are not more than 46,000 miles of such pavement in the United States. In this calculation the license fees only are considered. If the other taxes paid by the heavy trucks were included, it is probable that the total would be found to be sufficient to pay the additional cost of \$10,000 for the entire mileage. Certainly, it appears that these heavier commercial vehicles now pay a very considerable sum for their use of the highways.

*Comparative Highway Expenses of Motor and Rail Transport*

Let us examine the matter from another angle. As previously suggested, the question of the free or relatively free use of the highways by commercial motor vehicles is usually raised only when their operation is compared with that of other commercial carriers, especially the railways. It is claimed that the railway companies must, perforce, build and maintain their own tracks out of the revenues accruing from their operation, whereas the commercial motor trucks, using the public highways, have their roadway provided for them, and enjoy, therefore, considerable advantage in competition with the railways. As we have already seen, the commercial vehicles really do not enjoy absolutely free use of the highways but, on the contrary, pay very considerable sums for such use. Nevertheless, are these sums still so small that motor transport has a competitive advantage over railways? Suppose now that we examine the relative payments for roadways made by the commercial motor vehicles and a typical steam railway system.

It has already been shown that the average license fee paid by all motor trucks in 1924 was \$21.10 per truck. According to the National Automobile Chamber of Commerce the percentages of the various sizes of trucks manufactured in 1924, rated according to capacity, were as follows:  $\frac{3}{4}$ -ton and less, 10.8%; 1-ton, 71.4%;  $1\frac{1}{2}$ -ton, 7.7%; 2-ton, 2.2%;  $2\frac{1}{2}$ -ton, 3.8%;  $3\frac{1}{2}$ -ton, 1.0%; 5-ton, 1.8%; and over 5-ton, 1.3%. Assuming that these percentages apply approximately for all trucks in use, it appears that the capacity of the average truck is about  $1\frac{1}{4}$  tons. Therefore, it may be assumed that the aver-

age motor-truck license fee is about \$16.90 per ton of capacity.

According to the annual report of the Baltimore and Ohio Railroad Company for the calendar year 1924, that company paid from its revenue during the year a total of \$26,638,363.05 for maintenance of way and structures. The same report states that in the company's equipment there were 100,092 freight cars and 1,441 passenger cars. The freight revenues were more than six times as great as the passenger revenues. Let us consider, therefore, that the entire cost of maintenance of way and structures was paid by the freight business. Assuming then, that the capacity of the 100,092 freight cars averages 40 tons per car, we find that the draft upon the company's revenues for maintenance of way and structures was only \$6.65 per ton of freight-car capacity, or more than \$10 per ton less than the commercial motor trucks paid in license fees alone for the use of the highways.

On the basis of the above computations, therefore, the commercial motor vehicles not only pay a very considerable sum for their use of the highways, but also, on the average, they actually pay much more per ton of capacity than a typical well-kept railway sets aside from its earnings for the maintenance of its track and structures.

*Relative Proportions of Operating Income for Way Expenses*

However, there is another aspect to be considered. The owners of motor trucks may pay a very considerable sum for the use of the highways, and they may pay for that use a greater amount on a capacity basis than the railways pay for their tracks, but do they pay into the public treasuries for the construction and maintenance of the roads a fair

percentage of the income derived from the operation of their trucks?

In attempting to answer this question we must take into account the character of the highway service that the commercial-vehicle operators receive. A railway's tracks are generally maintained in a condition uniformly adequate for its traffic. The commercial motor-vehicle operators, on the other hand, have no such uniformly adequate highways to deal with in many of the states; and where the highway service is inadequate it is not to be expected that they will be willing to pay as great a proportion of their income as the railways pay for their tracks.

A number of the states, however, do offer fairly adequate highway service, and among these is the state of Connecticut. It happens that a good deal of information about the motor-truck traffic of that state has been gained from a comprehensive survey; so we shall take it as an example.

On the basis of the Connecticut survey made by the Bureau of Public Roads, it was estimated that the net volume of motor freight transported over the state road system between September, 1922, and September, 1923, was approximately 88,000,000 ton-miles.

At that time there were 29,140 motor trucks registered in the state. How many of these trucks made use of the rural highways and contributed to the total movement noted above it is, of course, impossible to say. Naturally some of them were operated in the cities exclusively. For our present purposes it is not necessary to know the exact volume of city or rural traffic. The fact remains that the owners of all these vehicles were taxed for the maintenance of the state highways whether they used them or not; and, as a group, they paid

in registration fees only, according to the Bureau's records, \$956,368.93. They paid, also, some additional sum in the form of permits and licenses; how much can only be estimated. The 29,140 motor trucks and the 148,791 passenger cars registered during the year paid between them, in the form of such licenses and permits, a total of \$1,070,909. If we assume that the motor trucks paid only in proportion to their numbers (a conservative assumption), then the motor-truck share would be approximately \$200,000. Adding this amount to the sum paid as registration fees we find that they paid in both ways not less than \$1,150,000, and there is still to be added the amount they paid in the form of gasoline taxes. Here again it is impossible to state exactly how much was paid by the motor trucks. The total tax collected from all motor vehicles, including automobiles and trucks, was \$880,222.70. If we again assume that the motor trucks paid only in proportion to their numbers (which is again a very conservative estimate) we must credit them with a payment of not less than \$140,000, and this added to the amount paid in other ways would bring their total contribution to the state up to not less than \$1,290,000.

This entire sum was paid into the state treasury by the motor trucks alone and all of it, under the laws of the state, was applicable to the construction and maintenance of the state roads. The excise taxes paid to the United States for new trucks and parts purchased during the year are not included, although these taxes also constitute a payment made by truck operators as a class, and in a sense may be said to be devoted to road improvement since they are paid into the United States Treasury from which are paid out the funds appropriated by the government for federal aid.



At the very least, therefore, the motor-truck owners of the state of Connecticut may be said to have paid toward the construction and maintenance of the state roads in 1923 the sum of \$1,290,000; and in return they received the benefits of highway service for a total movement of 88,000,000 ton-miles. It seems fair to say, therefore, that these owners paid for their use of the state highways at the rate of approximately 1.5 cents per ton-mile.

How much this movement may be said to have been worth to the truck owners can only be estimated. The bulk of it consisted of a movement of commodities in trucks owned by the shippers. A smaller portion was moved by commercial truckers. The rates charged for this latter portion would undoubtedly vary widely with the length of haul and the character and value of the commodities hauled. Investigation shows, however, that the rates charged by commercial haulers in various sections of the country range between the approximate limits of 10 and 20 cents per ton-mile; and a rate of 15 cents would appear to be reasonable as an average. If, then, we assume the entire Connecticut movement to have been handled by commercial truckers at the average rate of 15 cents per ton-mile, the ratio of the tax paid for the use of the roads to the gross operating revenue would be approximately 10%.

Whether or not this is a fair percentage may be reasonably determined by comparison with the practice of the railways; and it is interesting to note that during the 12-year period from 1911 to 1922 the average amount charged by the railways for maintenance of way and structures was 13.3% of their total operating income. Judged by railway standards, therefore, it would seem that, in Connecticut at least, the contri-

bution of the motor trucks toward the maintenance of the state highways was reasonably adequate.

In this analysis we have credited to the support of the highways the entire amount of the taxes of various kinds paid by all trucks registered in the state into the state treasury, whereas it is apparent that much of the haulage of these trucks must have been over city streets. But the fact remains that all truck owners, whether they used the state roads or not, paid for highway upkeep; and it seems a fair presumption that they paid for the use of the city streets their full share of the taxes levied by the municipalities for street construction and repair.

#### *Highway Expenses of Truck Owners in Other States*

It is true that the registration fees for motor trucks were higher in Connecticut in 1923 than in any other state. For the 25 states which segregated the fees received from motor trucks and automobiles, the average in that year was \$18.23 per motor truck as compared with an average of \$32.82 for Connecticut. On the other hand, the average capacity of motor trucks in this state was doubtless higher than the average for the United States, and the Connecticut gasoline tax was only 1 cent per gallon, which was less than the tax charged by 27 of the 35 states then levying gasoline taxes. Fifteen of those 27 states levied a tax of 2 cents per gallon; two charged 2½ cents; nine collected a 3-cent tax; and one a tax of 4 cents per gallon.

Moreover, although the majority of the states received a smaller contribution from motor trucks, few other states provided highway facilities the equal of those of Connecticut. If, therefore, the

motor-truck owners in this state paid a greater amount than the average for the use of the state highways, on the other hand the majority of states that received less gave less in return.

All these considerations indicate definitely that commercial-vehicle operators not only do not receive free highway service, but that they pay for the service they receive at a relatively higher rate per unit of capacity than the railways pay for their way and structures. Also, in states where the character of roads that trucks have to operate over will justify it, the owners pay out of their earnings almost as great a percentage as the railways.<sup>3</sup>

### *Subsidizing of Motor Transport Is a Popular Fallacy*

The comparisons with the railways have been made largely because popular opinion seems to hold that the supposedly free highway service enjoyed by commercial motor vehicles gives them an unfair advantage over the railways and enables their owners to establish such low rates for transport that business, properly the due of the rail carriers, is diverted. It has been shown that this belief is wrong in so far as it presupposes a free highway service for the commercial motor vehicles. It may also be shown from the evidence gathered in highway transportation surveys by the Bureau of Public Roads that it is wrong in several presumptions upon which it is founded.

<sup>3</sup> It might be said that the contributions of truck owners to the highway program go partly toward additions to the capital investment, whereas the railway expenditures used for comparison represent maintenance or renewal charges rather than capital additions. It is recognized that the expenditures of the railways for maintenance of way and structures do not include interest on the capital invested in

The first of these is that the commercial motor trucks come largely into competition with the railways. The surveys show definitely that the competitive field is very narrow. In the main, the motor trucks are engaged in a service of distribution to and from the railways, in short hauls which are unprofitable to the railways, and in the extension of transport service into areas not served by the railways.

The second presumption is that the commercial vehicles are operated largely as common carriers at a profit. The facts seem to show that the very great majority of them are operated, not as common carriers, but by persons and industries for the shipment of their own commodities, so-called owner-operators. We find, moreover, that there is every likelihood that the proportion of common carriers will remain low. Those individuals and companies which have thus far engaged in the motor transport business as common carriers have found profits to be low instead of high, so low in many cases that they have been forced to suspend operations.

The third presumption is that the motor-vehicle operators by virtue of their use of the public highways are able to establish rates which are lower than the rail rates and in that way take business from the railways. For this presumption also no reasonable foundation in fact appears. We find that motor-truck rates seldom, if ever, are lower than the corresponding rail rates. Generally they are slightly higher; and

the track and other expenditures on account of the track. But, on the other hand, the truck fees and taxes used for comparison do not include property taxes on the trucks, garages, and shops which in some states exceed the combined license fees and gasoline taxes and which would not be paid but for the existence of the trucks; nor do they include the federal excise taxes collected on the trucks and their tires and other accessories.



the business which the common-carrier trucks get comes to them largely because they offer direct and prompt service and, in some cases, because goods can be shipped safely by trucks with less crating and packing than by railways.

*Is Truck Competition Responsible for Abandonment of Rail Service?*

But, it may be asked, if all this is true, then what is the reason for the large mileage of track abandoned by the railways? Since 1916 the railways have abandoned more than 3,800 miles of track; what is the reason for that abandonment? The Bureau of Public Roads has looked into that question, and finds that just 4.3% of the mileage abandoned since 1920 can properly be attributed to highway competition. The Transportation Act, passed in that year, required all railways desiring to abandon trackage to secure certificates of public

convenience and necessity from the Interstate Commerce Commission. The facts involved in all abandonments since then are fully set forth in the published opinions of the Commission, and are therefore available for analysis. Of the 2,439 miles abandoned and thus explained, 4.3% was given up because of highway competition. Nearly 58% was mine and logging trackage abandoned on account of the exhaustion of the natural resources for the exploitation of which it was constructed. Almost 30% was brought about by the competition of other railways; 1.3% was the result of the rearrangement of lines; and 7.3% was due to other miscellaneous causes.

In the light of the facts revealed by these investigations we have come to the conclusion that the various taxes levied upon commercial motor vehicles are not unduly low and that they are in no substantial sense subsidized to the disadvantage of any other commercial carrier.

# WILDERNESS AS A FORM OF LAND USE

By ALDO LEOPOLD

FROM the earliest times one of the principal criteria of civilization has been the ability to conquer the wilderness and convert it to economic use. To deny the validity of this criterion would be to deny history. But because the conquest of wilderness has produced beneficial reactions on social, political, and economic development, we have set up, more or less unconsciously, the converse assumption that the ultimate social, political, and economic development will be produced by conquering the wilderness entirely—that is, by eliminating it from our environment.

My purpose is to challenge the validity of such an assumption and to show how it is inconsistent with certain cultural ideas which we regard as most distinctly American.

Our system of land use is full of phenomena which are sound as tendencies but become unsound as ultimates. It is sound for a city to grow but unsound for it to cover its entire site with buildings. It was sound to cut down our forests but unsound to run out of wood. It was sound to expand our agriculture, but unsound to allow the momentum of that expansion to result in the present overproduction. To multiply examples of an obvious truth would be tedious. The question, in brief, is whether the benefits of wilderness-conquest will extend to ultimate wilderness-elimination.

The question is new because in America the point of elimination has only recently appeared upon the horizon of foreseeable events. During our four centuries of wilderness-conquest the possibility of disappearance has been too

remote to register in the national consciousness. Hence we have no mental language in which to discuss the matter. We must first set up some ideas and definitions.

## *What Is a Wilderness Area?*

The term wilderness, as here used, means a wild, roadless area where those who are so inclined may enjoy primitive modes of travel and subsistence, such as exploration trips by pack-train or canoe.

The first idea is that wilderness is a resource, not only in the physical sense of the raw materials it contains, but also in the sense of a distinctive environment which may, if rightly used, yield certain social values. Such a conception ought not to be difficult, because we have lately learned to think of other forms of land use in the same way. We no longer think of a municipal golf links, for instance, as merely soil and grass.

The second idea is that the value of wilderness varies enormously with location. As with other resources, it is impossible to dissociate value from location. There are wilderness areas in Siberia which are probably very similar in character to parts of our Lake states, but their value to us is negligible, compared with what the value of a similar area in the Lake states would be, just as the value of a golf links would be negligible if located so as to be out of reach of golfers.

The third idea is that wilderness, in the sense of an environment as distinguished from a quantity of physical materials, lies somewhere between the

class of non-reproducible resources like minerals, and the reproducible resources like forests. It does not disappear proportionately to use, as minerals do, because we can conceive of a wild area which, if properly administered, could be traveled indefinitely and still be as good as ever. On the other hand, wilderness certainly cannot be built at will, like a city park or a tennis court. If we should tear down improvements already made in order to build a wilderness, not only would the cost be prohibitive, but the result would probably be highly dissatisfying. Neither can a wilderness be grown like timber, because it is something more than trees. The practical point is that if we want wilderness, we must foresee our want and preserve the proper areas against the encroachment of inimical uses.

Fourth, wilderness exists in all degrees, from the little accidental wild spot at the head of a ravine in a Corn Belt woodlot to vast expanses of virgin country—

*"Where nameless men by nameless rivers  
wander*

*And in strange valleys die strange deaths  
alone."*

What degree of wilderness, then, are we discussing? The answer is, *all degrees*. Wilderness is a relative condition. As a form of land use it cannot be a rigid entity of unchanging content, exclusive of all other forms. On the contrary, it must be a flexible thing, accommodating itself to other forms and blending with them in that highly localized give-and-take scheme of land-planning which employs the criterion of "highest use." By skilfully adjusting one use to another, the land planner builds a balanced whole without undue sacrifice of any function, and thus attains a maximum net utility of land.

Just as the application of the park idea in civic planning varies in degree from the provision of a public bench on a street corner to the establishment of a municipal forest playground as large as the city itself, so should the application of the wilderness idea vary in degree from the wild, roadless spot of a few acres left in the rougher parts of public forest devoted to timber-growing, to wild, roadless regions approaching in size a whole national forest or a whole national park. For it is not to be supposed that a public wilderness area is a new kind of public land reservation, distinct from public forests and public parks. It is rather a new kind of land-dedication within our system of public forests and parks, to be duly correlated with dedications to the other uses which that system is already obligated to accommodate.

Lastly, to round out our definitions, let us exclude from practical consideration any degree of wilderness so absolute as to forbid reasonable protection. It would be idle to discuss wilderness areas if they are to be left subject to destruction by forest fires, or wide open to abuse. Experience has demonstrated, however, that a very modest and unobtrusive framework of trails, telephone line and lookout stations will suffice for protective purposes. Such improvements do not destroy the wild flavor of the area, and are necessary if it is to be kept in usable condition.

#### *Wilderness Areas in a Balanced Land System*

What kind of case, then, can be made for wilderness as a form of land use?

To preserve any land in a wild condition is, of course, a reversal of economic tendency, but that fact alone

should not condemn the proposal. A study of the history of land utilization shows that good use is largely a matter of good balance—of wise adjustment between opposing tendencies. The modern movements toward diversified crops and live stock on the farm, conservation of eroding soils, forestry, range management, game management, public parks—all these are attempts to balance opposing tendencies that have swung out of counterpoise.

One noteworthy thing about good balance is the nature of the opposing tendencies. In its more utilitarian aspect, as seen in modern agriculture, the needed adjustment is between economic uses. But in the public park movement the adjustment is between an economic use, on the one hand, and a purely social use on the other. Yet, after a century of actual experience, even the most rigid economic determinists have ceased to challenge the wisdom of a reasonable reversal of economic tendency in favor of public parks.

I submit that the wilderness is a parallel case. The parallelism is not yet generally recognized because we do not yet conceive of the wilderness environment as a resource. The accessible supply has heretofore been unlimited, like the supply of air-power, or tide-power, or sunsets, and we do not recognize anything as a resource until the demand becomes commensurable with the supply.

Now after three centuries of overabundance, and before we have even realized that we are dealing with a non-reproducible resource, we have come to the end of our pioneer environment and are about to push its remnants into the Pacific. For three centuries that environment has determined the character of our development;

it may, in fact, be said that, coupled with the character of our racial stocks, it is the very stuff America is made of. Shall we now exterminate this thing that made us American?

Ouspensky says that, biologically speaking, the determining characteristic of rational beings is that their evolution is self-directed. John Burroughs cites the opposite example of the potato bug, which, blindly obedient to the law of increase, exterminates the potato and thereby exterminates itself. Which are we?

### *What the Wilderness Has Contributed to American Culture*

Our wilderness environment cannot, of course, be preserved on any considerable scale as an economic fact. But, like many other receding economic facts, it can be preserved for the ends of sport. But what is the justification of sport, as the word is here used?

Physical combat between men, for instance, for unnumbered centuries was an economic fact. When it disappeared as such, a sound instinct led us to preserve it in the form of athletic sports and games. Physical combat between men and beasts since first the flight of years began was an economic fact, but when it disappeared as such, the instinct of the race led us to hunt and fish for sport. The transition of these tests of skill from an economic to a social basis has in no way destroyed their efficacy as human experiences—in fact, the change may be regarded in some respects as an improvement.

Football requires the same kind of back-bone as battle but avoids its moral and physical retrogressions. Hunting for sport in its highest form is an improvement on hunting for food in that there has been added, to the test of skill,

an ethical code which the hunter formulates for himself and must often execute without the moral support of bystanders.

In these cases the surviving sport is actually an improvement on the receding economic fact. Public wilderness areas are essentially a means for allowing the more virile and primitive forms of outdoor recreation to survive the receding economic fact of pioneering. These forms should survive because they likewise are an improvement on pioneering itself.

There is little question that many of the attributes most distinctive of America and Americans are the impress of the wilderness and the life that accompanied it. If we have any such thing as an American culture (and I think we have), its distinguishing marks are a certain vigorous individualism combined with ability to organize, a certain intellectual curiosity bent to practical ends, a lack of subservience to stiff social forms, and an intolerance of drones, all of which are the distinctive characteristics of successful pioneers. These, if anything, are the indigenous part of our Americanism, the qualities that set it apart as a new rather than an imitative contribution to civilization. Many observers see these qualities not only bred into our people, but built into our institutions. Is it not a bit beside the point for us to be so solicitous about preserving those institutions without giving so much as a thought to preserving the environment which produced them and which may now be one of our effective means of keeping them alive?

#### *Wilderness Locations*

But the proposal to establish wilderness areas is idle unless acted on before

the wilderness has disappeared. Just what is the present status of wilderness remnants in the United States?

Large areas of half a million acres and upward are disappearing very rapidly, not so much by reason of economic need, as by extension of motor roads. Smaller areas are still relatively abundant in the mountainous parts of the country, and will so continue for a long time.

The disappearance of large areas is illustrated by the following instance: In 1910 there were six roadless regions in Arizona and New Mexico, ranging in size from half a million to a million acres, where the finest type of mountain wilderness pack trips could be enjoyed. Today roads have eliminated all but one area of about half a million acres.

In California there were seven large areas ten years ago, but today there are only two left unmotorized.

In the Lake states no large unmotorized playgrounds remain. The motor launch, as well as the motor road, is rapidly wiping out the remnants of canoe country.

In the Northwest large roadless areas are still relatively numerous. The landplans of the Forest Service call for exclusion of roads from several areas of moderate size.

Unless the present attempts to preserve such areas are greatly strengthened and extended, however, it may be predicted with certainty that, except in the Northwest, all of the large areas already in public ownership will be invaded by motors in another decade.

In selecting areas for retention as wilderness, the vital factor of location must be more decisively recognized. A few areas in the national forests of Idaho or Montana are better than none, but, after all, they will be of limited usefulness to the citizen of Chicago or



New Orleans who has a great desire but a small purse and a short vacation. Wild areas in the poor lands of the Ozarks and the Lake states would be within his reach. For the great urban populations concentrated on the Atlantic seaboard, wild areas in both ends of the Appalachians would be especially valuable.

Are the remaining large wilderness areas disappearing so rapidly because they contain agricultural lands suitable for settlement? No; most of them are entirely devoid of either existing or potential agriculture. Is it because they contain timber which should be cut? It is true that some of them do contain valuable timber, and in a few cases this fact is leading to a legitimate extension of logging operations; but in most of the remaining wilderness the timber is either too thin and scattered for exploitation, or else the topography is too difficult for the timber alone to carry the cost of roads or railroads. In view of the general belief that lumber is being overproduced in relation to the growing scarcity of stumpage, and will probably so continue for several decades, the sacrifice of wilderness for timber can hardly be justified on grounds of necessity.

Generally speaking, it is not timber, and certainly not agriculture, which is causing the decimation of wilderness areas, but rather the desire to attract tourists. The accumulated momentum of the good-roads movement constitutes a mighty force, which, skilfully manipulated by every little mountain village possessed of a chamber of commerce and a desire to become a metropolis, is bringing about the extension of motor roads into every remaining bit of wild country, whether or not there is economic justification for the extension.

Our remaining wild lands are wild be-

cause they are poor. But this poverty does not deter the booster from building expensive roads through them as bait for motor tourists.

I am not without admiration for this spirit of enterprise in backwoods villages, nor am I attempting a censorious pose toward the subsidization of their ambitions from the public treasuries; nor yet am I asserting that the resulting roads are devoid of any economic utility. I do maintain, (1) that such extensions of our road systems into the wilderness are seldom yielding a return sufficient to amortize the public investment; (2) that even where they do yield such a return, their construction is not necessarily in the public interest, any more than obtaining an economic return from the last vacant lot in a parkless city would be in the public interest. On the contrary, the public interest demands the careful planning of a system of wilderness areas and the permanent reversal of the ordinary economic process within their borders.

To be sure, to the extent that the motor-tourist business is the cause of invasion of these wilderness playgrounds, one kind of recreational use is merely substituted for another. But this substitution is a vitally serious matter from the point of view of good balance. It is just as unwise to devote 100% of the recreational resources of our public parks and forests to motorists as it would be to devote 100% of our city parks to merry-go-rounds. It would be just as unreasonable to ask the aged to indorse a park with only swings and trapezes, or the children a park with only benches, or the motorists a park with only bridle-paths, as to ask the wilderness recreationist to indorse a universal priority for motor roads. Yet that is what our land plans—or rather lack of them—are



now doing; and so sacred is our dogma of "development" that there is no effective protest. The inexorable molding of the individual American to a standardized pattern in his economic activities makes all the more undesirable this unnecessary standardization of his recreational tastes.

### *Practical Aspects of Establishing Wilderness Areas*

Public wilderness playgrounds differ from all other public areas in that both their establishment and maintenance would entail very low costs. The wilderness is the one kind of public land that requires no improvements. To be sure, a simple system of fire protection and administrative patrol would be required, but the cost would not exceed two or three cents per acre per year. Even that would not usually be a new cost, since the greater part of the needed areas are already under administration in the rougher parts of the national forests and parks. The action needed is the permanent differentiation of a suitable system of wild areas within our national park and forest system.

In regions such as the Lake states, where the public domain has largely disappeared, lands would have to be purchased; but that will have to be done, in any event, to round out our park and forest system. In such cases a lesser degree of wilderness may have to suffice, the only ordinary utilities practicable to exclude being cottages, hotels, roads, and motor boats.

The retention of certain wild areas in both national forests and national parks will introduce a healthy variety into the wilderness idea itself, the forest areas serving as public hunting grounds, the park areas as public wild-life sanctuaries, and both kinds as public play-

grounds in which the wilderness environments and modes of travel may be preserved and enjoyed.

### *The Cultural Value of Wilderness*

Are these things worth preserving? This is the vital question. I cannot give an unbiased answer. I can only picture the day that is almost upon us when canoe travel will consist in paddling in the noisy wake of a motor launch and portaging through the back yard of a summer cottage. When that day comes, canoe travel will be dead, and dead, too, will be a part of our Americanism. Joliet and LaSalle will be words in a book, Champlain will be a blue spot on a map, and canoes will be merely things of wood and canvas, with a connotation of white duck pants and bathing "beauties."

The day is almost upon us when a pack-train must wind its way up a graveled highway and turn out its bell-mare in the pasture of a summer hotel. When that day comes the pack-train will be dead, the diamond hitch will be merely rope, and Kit Carson and Jim Bridger will be names in a history lesson. Rendezvous will be French for "date," and Forty-Nine will be the number preceding fifty. And thenceforth the march of empire will be a matter of gasoline and four-wheel brakes.

European outdoor recreation is largely devoid of the thing that wilderness areas would be the means of preserving in this country. Europeans do not camp, cook, or pack in the woods for pleasure. They hunt and fish when they can afford it, but their hunting and fishing is merely hunting and fishing, staged in a setting of ready-made hunting lodges, elaborate fare, and hired beaters. The whole thing carries the atmosphere of a picnic rather than that

of a pack trip. The test of skill is confined almost entirely to the act of killing, itself. Its value as a human experience is reduced accordingly.

There is a strong movement in this country to preserve the distinctive democracy of our field sports by preserving free hunting and fishing, as distinguished from the European condition of commercialized hunting and fishing privileges. Public shooting grounds and organized cooperative relations between sportsmen and landowners are the means proposed for keeping these sports within reach of the American of moderate means. Free hunting and fishing is a most worthy objective, but it deals with only one of the two distinctive characteristics of American sport. The other characteristic is that our test of skill is primarily the act of living in the open, and only secondarily the act of killing game. It is to preserve this primary characteristic that public wilderness playgrounds are necessary.

Herbert Hoover aptly says that there is no point in increasing the average American's leisure by perfecting the organization of industry, if the expansion of industry is allowed to destroy the recreational resources on which leisure may be beneficially employed. Surely the wilderness is one of the most valuable of these resources, and surely the build-

ing of unproductive roads in the wrong places at public expense is one of the least valuable of industries. If we are unable to steer the Juggernaut of our own prosperity, then surely there is an impotence in our vaunted Americanism that augurs ill for our future. The self-directed evolution of rational beings does not apply to us until we become collectively, as well as individually, rational and self-directing.

Wilderness as a form of land-use is, of course, premised on a qualitative conception of progress. It is premised on the assumption that enlarging the range of individual experience is as important as enlarging the number of individuals; that the expansion of commerce is a means, not an end; that the environment of the American pioneers had values of its own, and was not merely a punishment which they endured in order that we might ride in motors. It is premised on the assumption that the rocks and rills and templed hills of this America are something more than economic materials, and should not be dedicated exclusively to economic use.

The vanguard of American thought on the use of land has already recognized all this, in theory. Are we too poor in spirit, in pocket, or in idle acres to recognize it likewise in fact?

## LARGE LAND HOLDINGS IN NORTH DAKOTA

By ALVA H. BENTON

IN popular belief North Dakota abounds in large farms of the bonanza type. The spread of this belief was no doubt accomplished originally by the advertising of railways and land agents who were interested in drawing settlers to the state. Further credence was given to the belief by writers who cited the bonanza farms as an illustration of some thesis or observation. Particularly, many socialistic writers mentioned these large land holdings as an indication of the natural and inevitable trend of the concentration of capital in agriculture.

How true is this picture of North Dakota as a land of bonanza farms?

As a matter of fact relatively few large land holdings of the bonanza type now exist in North Dakota. Although the average-sized farm is larger than in other North Central states, physical conditions and economic developments make this feature entirely natural. But the bonanza farms in eastern North Dakota which characterized the opening up of the region can hardly be called typical of the state today; they have, in fact, largely been broken up into smaller farm units, ranging from 320 acres to 640 acres in size. In the western part of the state, particularly in the country west of the Missouri River, large cattle ranches were common during the period from 1880 to 1900, but most of this land also is now divided into farms devoted to grain and to stock-raising. The ranchers of this early period owned little or no land; they were, for the most part, squatters

on unsold government land, who put up buildings at some suitable point from which they could run their cattle over the surrounding prairies.

The crux of this development is that the bonanza farms were not established on a permanent, economic basis; and, hence, they have almost entirely disappeared within a generation. Briefly the bonanza farm did not indicate a trend; it was a temporary phase in the history of agriculture in the state. Even at the time when the fame of North Dakota's large farms was being heralded in foreign countries, men who were familiar with the farming situation recognized their temporary character. This fact cannot be adequately realized without considering the circumstances which created large land holdings and the economic forces which subdivided them.

### *Establishment of Bonanza Wheat Farms*

The concentration of large farm areas under one management was closely associated with the westward march of railway facilities. In 1864 the Northern Pacific Railway Company was granted a charter by Congress for the construction of a railway from Duluth on Lake Superior to Puget Sound. In connection with this charter the company was given a huge grant of land along the right of way which finally totalled 28,916,338 acres.<sup>1</sup> Of this amount

<sup>1</sup> Hibbard, B. H., *A History of the Public Land Policies*, (New York), 1924, p. 264.

about 10,700,289 acres were in North Dakota.<sup>2</sup>

Jay Cooke and Company, which undertook to finance the building of this railway, failed in the autumn of 1873 and the railway's funds from this source were shut off. In addition to this, the land did not sell readily and there was little income from this subsidy. The failure of Jay Cooke and Company was even attributed to the "poor" lands which had been used by the company as security for its bonds. In order to counteract this feeling, James B. Power, who was in charge of land sales for the railway company, induced several heavy bond-holders and high officials of the road to exchange their almost worthless bonds for land in the Red River Valley for the purpose of demonstrating its value for agricultural purposes. He also showed them the possibility of realizing something in this way from their investments in the railway bonds and preferred stock. This was the origin of the first "bonanza" farm, soon known as the Dalrymple Farms. In the autumn of 1873 prior to the establishment of the Dalrymple Farms, a homesteader on the Sheyenne River near Fargo raised 1,600 bushels of wheat on 40 acres, which sold for \$1.25 a bushel. This was cited as an indication of the great possibilities of the land for wheat production, both with respect to yields and price.<sup>3</sup>

The railway company, being anxious to build up a good name for the country, bring in settlers on whom they had to depend for freight revenue, and make sales of land, gave wide-spread publicity to the wheat-growing possibilities of

the prairies of eastern North Dakota. Speculators began to exchange securities for land largely for the purpose of selling at a profit. The Northern Pacific Railway Company valued its lands at \$2.50 to \$12 an acre and would accept its bonds and preferred stock at par in exchange. This made the land cost from 37½ cents to \$1.65 per acre, as bonds could be bought at low prices and the stock could be bought in small lots from \$14 to \$16 per share of \$100 each.<sup>4</sup>

Those who actually came into the country for the purpose of farming on a large scale needed contiguous tracts. These could not be obtained from the railway company, as the government charter granted only alternate sections, but other land needed to consolidate their holdings was secured in various other ways. Much was purchased direct from homesteaders after they had secured title or before they had secured title, by means of a relinquishment which was recognized by the government. Other land was secured through the purchase and use of United States military bounty land warrants and Indian war scrip, both of which were negotiable. Some individuals secured much land by questionable means. There are well-founded tales of men who homesteaded many sections of land in the names of their mules or their hired men.

#### *Economic Conditions Underlying Bonanza Farms*

From 1877 to 1883 the Red River Valley was favored with good yields of

<sup>2</sup> Letter from Land Commissioner, Northern Pacific Railway Company, 1925.

<sup>3</sup> *Collections of the State Historical Society of North Dakota*, Vol. III, p. 344.

<sup>4</sup> Coulter, J. L., "Industrial History of the Valley of the Red River of the North," *Collections of the State Historical Society of North Dakota*, Vol. III, p. 587, from *Report of the Commissioner of Statistics of Minnesota for 1877*, p. 158.

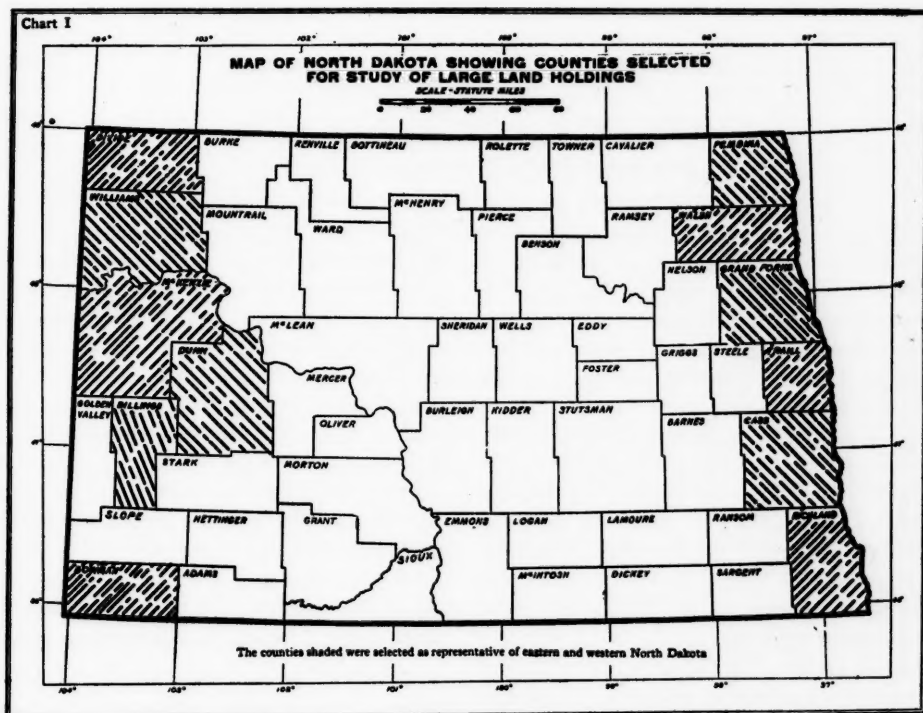
wheat, which were in vivid contrast to yields of the years 1870 to 1876, when hordes of locusts (grasshoppers) and unsatisfactory weather conditions had kept the homesteaders from making much progress. The bonanza farms not only developed under favorable weather conditions and the absence of serious insect pests, but also were fortunate in starting operations during a period when wheat prices were relatively high. Hard spring wheat was in great demand by the millers and number 1 hard brought the farmers around \$1 a bushel. Under efficient bonanza farm conditions, this wheat was produced at a cost of 35 to 40 cents a bushel, according to William Dalrymple, the pioneer bonanza farm manager. For the years 1876 to 1879 he reported yields of more than 20 bushels per acre and his

figures indicated a net profit of \$10 or \$12 per acre.<sup>5</sup> Poor harvests in England and European countries<sup>6</sup> in the years 1879-1881 apparently had much to do with the high prices in America.

In discussing the development of farming in eastern North Dakota where the bonanza wheat farms sprang into existence, it should be noted that the land was a prairie country, free from trees or stones, and almost as level as a floor. It was thus well adapted to large-scale farming methods. There was no expense for clearing the land,

<sup>5</sup> Collections of the State Historical Society of North Dakota, Vol. III, p. 597.

<sup>6</sup> Coulter, "Industrial History of the Valley of the Red River of the North," Collections of the State Historical Society of North Dakota, Vol. III, p. 608, from *Journal of Royal Statistical Society*, Vol. LVIII, pp. 82-83.





and machinery of maximum size could be used to full capacity. Whereas the first settlers used one-bottom plows and small seeders drawn by two-horse teams, within a decade four-horse teams, two-bottom gang plows, and 12- to 14-foot drills came into common use. It is thus seen how physical conditions favored large farms, and economic conditions also were at first favorable.

Most of the other large bonanza farms were also established during the pioneering period from 1875 to 1878. Some of the best known were:

Farms	County	Acres
The Grandin Farms	Traill County	61,100
Amenia and Sharon		
Land Co.	Cass County	28,350
Cooper Farms	Barnes County	34,000
Antelope Farm	Richland County	17,300
Mosher Farms	Cass County	19,000
Spiritwood Farms	Stutsman County	19,700
Hillsboro Farm	Traill County	40,000

Reference to the map reproduced in Chart I, on the preceding page, will show that these farms are all located in the eastern part of the state.

#### *Progress of Typical Bonanza Farms*

Most of these holdings have been broken up and sold, or are now operated as individual family-sized farms under share rental agreements of various kinds. This almost universal experience is well illustrated by the history of the Dalrymple holdings.

Two of the heavy investors in the railway, George W. Cass and P. B. Cheney, in 1873 exchanged their almost worthless bonds for land in eastern North Dakota and formed a partnership with William Dalrymple, an experienced farmer from Minnesota who took direct charge of the land and put it into crops. This method of realizing on their bonds was successful, and the

land secured at 50 to 60 cents an acre rose rapidly in value when splendid yields of wheat were secured. This partnership started with 13,440 acres. More was added through exchange of bonds and use of scrip issued to veterans of Indian wars, the outright purchase from homesteaders and others. By 1878 the Dalrymple land holdings, as they were then known, amounted to 100,000 acres, with 65,000 acres under cultivation.<sup>7</sup>

The Dalrymple lands were operated in units of 2,000 to 3,000 acres, each presided over by a superintendent and foreman. In 1896 the partnership was dissolved and Dalrymple came into control of about 30,000 acres. The holding was divided into 10 units and was operated by the Dalrymples until 1918 when the estate was broken up and sold because the heirs felt the interest on the money was more than they could make from operating the land. Much of the land sold under the high prices that then prevailed has since reverted to them, and in 1925 they are erecting several new sets of buildings in order to farm under the changing conditions.

The Amenias and Sharon Land Company is one of the most interesting of the bonanza farms. The owners, who came from Amenias, New York, and Sharon, Connecticut, gradually consolidated their holdings and from 1875 to 1893 the land was operated as a single unit. From 1893 to 1922 the land was divided up into units, usually of a half-section to a section, and run on a share plan. In 1921, before the dissolution, there were 65 farm units, aggregating 35,000 acres.

In 1922 the land was divided among the heirs, largely for the purpose of escaping the heavy income taxes. The

<sup>7</sup> *History of the Red River Valley*, Vol. I, p. 233.



land is still being operated in much the same manner by the various heirs. The Amenia and Sharon Land Company has always taken an interest in keeping up the productivity of the land and in developing the welfare of their community. During the tenancy period the renters fared well and many of them remained with the company for a considerable period of years (see Table I). The company, likewise, found its operations profitable. From 1879 to 1919 the real estate increased in value \$2.50 per acre annually. From 1896 to 1920 the valuation increased 8.4%, compounded annually, and in addition the annual rentals averaged 4.5%. A part of the increase in land values was due to improvements, but "the net financial benefit from increase in land values and from rents was about 9.3%, compounded yearly," for the period from 1896 to 1920. As indicated in Table II, profits did not come from depletion of the soil.

One of the largest holdings of land operated as a single enterprise in North Dakota at the present time consists of four ranches in southeastern North Dakota in Dickey County, embracing about 6,000 acres, owned by the Baldwin Corporation of Appleton, Wisconsin. This 6,000 acres is a part of some 75,000 acres of land which was acquired by George Baldwin, beginning about 1891. Purchases were made at very low figures, ranging from \$200 to \$500 per quarter section of 160 acres. Much of this has since been sold at prices ranging from \$40 to \$60 per acre, but some 30,000 acres remain which are rented, in addition to the 6,000 acres operated by the corporation.

After the death of George Baldwin, Sr., in 1907, the land passed into the hands of trustees for a period of 10 years. In his will he advised that the

land be sold and the proceeds invested in land mortgages. This large tract of land was weedy and unimproved and did not sell well, and even held back the development of the whole country. The trustees decided to break up the land into 320-acre farms, erect buildings, and rent on a live stock share plan. Good renters were so difficult to find that it was decided to form a part of it into large ranches and manage from a single center.

The present four ranches, comprising 6,000 acres in almost a single tract near Ellendale, North Dakota, is an outcome of this policy. This large holding is under the direction of J. C. McNary, formerly a county agent in Minnesota. He has put into practice a diversified system of agriculture which includes a large acreage of corn and alfalfa, and practically no wheat. His farming methods have been successful, and the income is largely derived from the sale of cattle, wool, cream, and hogs. A foreman is hired for each one

TABLE I. TENANTS' LENGTH OF TENURE  
AMENIA AND SHARON LAND  
COMPANY,\* 1921

Number of Years as a Tenant	Number of Ten- ants	Number of Ten- ants	Per Cent of Ten- ants
Under 1 year.....	4		
1 year.....	7	11	16.9%
2 years.....	5		
3 years.....	6		
4 years.....	7	18	27.7
5 years.....	5		
6 years.....	7		
7 years.....	4	16	24.6
8 years.....	3		
9 years.....	4		
10-14 years.....	9	16	24.6
15-19 years.....	1		
20 years and over.	3	4	6.2
Totals.....	65	65	100%

\*Benton, Alva H., *Cash and Share Renting of Farms*, North Dakota Experiment Station Bulletin, No. 171, p. 39.

of the ranches making up the unit, and all men are employed on a monthly cash basis. Household supplies and equipment are furnished by the corporation. In 1923 the inventory value of the four ranches was \$471,533, and 4.1% was earned on this amount, allowing \$6,000 for management services.

### *Large Holdings in Western North Dakota*

Although the number of large land holdings in North Dakota is now relatively small, considerable interest attaches to a number of them owing to historic associations. In 1883 Theodore Roosevelt made a hunting trip to western North Dakota and was so attracted by the country that he bought the Chimney Butte ranch, which consisted of a few buildings and no land. By common consent the owner of a set of buildings had the use of the surrounding land for grazing his cattle. Later

Roosevelt erected another set of buildings which was the headquarters of the Elk Horn ranch, and at one time he owned about 5,000 head of cattle. For several years he operated these ranches under his personal direction, but later sold them when his public activities kept him in the East.

In the spring of 1883, the same year that Roosevelt made his first trip to western North Dakota, Marquis DeMores, a French nobleman, also made a hunting trip to North Dakota. He likewise was so impressed with the country within the actual ranch region that he purchased about 7,000 acres near the present town of Medora in Billings County. He erected a 35-room house and also a meat-packing plant whereby he planned to save the freight on cattle by shipping the less bulky dressed meat. The venture was unsuccessful from the beginning and the Marquis and his young wife, the daughter of a wealthy New York banker,

TABLE II. YIELD PER ACRE OF WHEAT HARVESTED ON 16 FARMS OF THE AMENIA AND SHARON LAND COMPANY AND ESTIMATES FOR CASS COUNTY, NORTH DAKOTA, 1893 TO 1921\*

YEAR	YIELD OF WHEAT		YEAR	YIELD OF WHEAT	
	Sixteen Farms	County Estimates		Sixteen Farms	County Estimates
1893.....	10.7	†	1908.....	15.6	11.6
1894.....	15.3	11.8	1909.....	15.9	14.3
1895.....	24.3	21.0	1910.....	9.0	5.0
1896.....	11.8	11.8	1911.....	11.2	8.0
1897.....	12.5	10.3	1912.....	18.6	18.0
1898.....	15.1	14.4	1913.....	14.3	10.5
1899.....	17.7	12.8	1914.....	8.7	11.2
1900.....	5.4	4.9	1915.....	15.2	18.3
1901.....	14.7	13.1	1916.....	1.4	5.5
1902.....	19.2	15.9	1917.....	14.9	8.0
1903.....	18.0	12.7	1918.....	18.2	13.7
1904.....	13.8	11.8	1919.....	4.9	6.9
1905.....	15.5	14.0	1920.....	11.1	9.0
1906.....	16.0	13.0	1921.....	7.1	9.0
1907.....	13.0	10.0			

\*Benton, Alva H., *Cash and Share Renting of Farms*, North Dakota Experiment Station Bulletin, No. 171, p. 40.

†Not available.

lived there only a short time. The Marquis was later killed by African natives while on an expedition to that country. The estate, however, has been kept intact and is still in the hands of a caretaker. The oldest son plans a trip to Medora this year to erect a monument to his mother who died a few years ago.

As already stated, the Northern Pacific Railway Company was given large grants of land in North Dakota, about 10,700,000 acres. Nearly all of this lying east of the Missouri River has been disposed of, but west of the Missouri River it still owns a little over 130,000 acres. Most of this is the less desirable land and much of it has once been sold, but reverted to the railway company in times of financial stress.

#### *Present Status of Large Land Holdings*

To reenforce these brief sketches of the history of particular bonanza farms, it is desirable to picture the general trend of the size of farms in the state. Although each census period from 1900 to 1920 shows an increase in the total number of farms (see Table III) and also both an actual and a relative increase in the number of farms in the largest group, that is, farms including 1,000 acres or more, there is no indication of a state-wide trend toward

TABLE IV. TREND IN SIZE OF LARGE FARMS IN REPRESENTATIVE COUNTIES OF EASTERN AND WESTERN NORTH DAKOTA

EASTERN COUNTIES	1,000-ACRE FARMS AND OVER		WESTERN COUNTIES	1,000-ACRE FARMS AND OVER	
	1910	1920		1910	1920
Pembina....	44	36	Billings....	38	93
Grand Forks....	69	55	McKenzie....	8	196
Walsh.....	20	20	Bowman....	5	101
Trall.....	52	38	Dunn.....	52	122
Richland....	32	23	Williams....	33	79
Cass.....	124	75	Divide.....	6	26

larger land holdings. The increase in large land holdings in western North Dakota is a result of the sale of government land and the change from the old system of free grazing land to that of private ownership. Consequently, the individual farms in that region are larger than those commonly found now in the eastern part of the state. From 1900 to 1920 the total amount of land in farms increased from 28,476,000 acres to 36,214,000 acres, and the amount in farms of 1,000 acres or over increased from 3,389,000 acres to 6,553,000 acres.

That the increase in the number of large farms has come from the breaking up of this ranch country is also indicated by comparing the number of farms in the 1,000-acre group in representative eastern and western counties (see Table IV). There is a decided increase in the number of farms in this group in each one of the western counties, whereas in the eastern counties in all but one county there has been a decided decrease in farms of this size.

It is well to note that west of the Missouri River there is much rough land better suited to grazing than to cultivated crops, and that the rainfall is not so dependable as in eastern North Dakota. Under these conditions the economic farm unit is much larger than in the eastern part of the state—more

TABLE III. FARMS IN THE LARGER GROUPINGS IN NORTH DAKOTA\*

YEAR	TOTAL NUMBER OF FARMS	FARMS OF 1,000 ACRES AND OVER		
		Number	Percentage of Total Farms	Percentage of Total Farm Acreage
1890..	27,611	389	1.4	...
1900..	45,332	1,346	3.0	16.4
1910..	74,360	2,416	3.2	13.7
1920..	77,690	3,944	5.1	18.1

\*United States Census Reports.

acres are needed to support each head of live stock. In eastern North Dakota 320 to 480 acres makes the best family-sized, diversified farm, whereas in the western part of the state the best farmers utilize about 800 acres.<sup>8</sup>

The need of rather a large acreage in individual farms is indicated by the low land values in some of the representative counties along the western border of the state (Table V). When comparing sizes of farms, the number of acres is not a correct measure where the type of farming or climatic and soil conditions vary as widely as they do in eastern and western North Dakota; the value of a representative farm is a better indication of relative size. On this basis farms in the eastern part of the state are two or three times as large as those in the western part.

#### *Advantages and Disadvantages of Large and Small Farms*

The gradual break-up of the largest bonanza farms in eastern North Dakota and the present ascendancy of smaller family-sized farms are chiefly the result of economic forces which became increasingly important after the initial period of opening up the state. Consideration of some of these changing forces throws light upon the temporary character of the large land holdings. If these factors had been adequately realized by the public in the earlier period, the impression of North Dakota as a land of huge farms would probably not have gained such wide currency.

The operators of large farms in the beginning had several advantages over the small farmers. They usually had sufficient capital to break up the prairie sod rapidly and to secure the necessary equipment for preparing, seeding, and harvesting the crops. They were in

a position to ship in their supplies, horses, and machinery in carload lots, thereby making substantial savings in freight. They likewise could ship their wheat in carload lots and greatly reduce the local marketing costs which the small farmer was forced to pay. Favoritism toward large shippers was also by no means unknown.

As the small farmers owning from 160 acres up to 640 acres or more began to accumulate capital and to farm efficiently, and as land values increased, the small farm began to prove itself a more profitable unit than the bonanza farm. When the land was low in price, when yields were large, and when prices were high, the large farm was operated under more favorable conditions. When interest was figured on increased values as a part of cost, when yields decreased owing to insect pests and plant diseases, when taxes began to mount, and when prices fell, the large farm with its scores of hired men and expensive equipment was placed in a less favorable position than the smaller farm on which the farmer and his family did most of the work. The large farms were dependent on transient help, as they needed it for only a few months. This casual labor was neither efficient nor dependable in many instances. One farmer is quoted as follows: "We

<sup>8</sup> *Economic Study of Farming in Southwestern North Dakota*, North Dakota Bulletin, No. 180.

TABLE V. LAND VALUES IN REPRESENTATIVE EASTERN AND WESTERN NORTH DAKOTA COUNTIES\*

EASTERN COUNTIES	VALUE PER ACRE	WESTERN COUNTIES	VALUE PER ACRE
Pembina.....	\$55.96	Billings.....	\$11.68
Grand Forks.....	60.20	McKenzie.....	12.68
Walsh.....	64.52	Bowman.....	15.22
Traill.....	68.12	Dunn.....	18.75
Richland.....	69.65	Williams.....	19.49
Cass.....	75.62	Divide.....	26.56

\*United States Census Report, 1920.



always have three crews of men, one coming, one working, and one going."<sup>9</sup>

For a short time during the war period, farm wages and other expenses did not rise as fast as prices, and this caused some farmers to expand their land holdings along the lines of the bonanza farm. In the depression after the war these are the men who fell into most serious financial straits.

The fear of those who saw in these bonanza farms the development of the factory system in agriculture, and the exultation of Marxian socialists who saw additional proof of their theory of concentration of capital were both ill-founded. These large holdings were simply a passing phase in the development of a new area, and were not always profitable, even under the most favorable conditions, as stated by a stockholder interested in a tract of 30,000 acres of good land in the Red River Valley: "The business of the company has been managed with the skill and economy of an able and experienced farmer, and under generally favorable circumstances . . . the company has not realized any extravagant profits—only a reasonable return, considering the experimental nature of the venture." And to show that this was not an abnormal case or an attempt to conceal profits, he adds: "It is probable that the net income of this company is equal, in the percentage of capital, to any of the great farms in the vicinity. The object of this company is not to continue a gigantic farm, but to develop the land and form a nucleus for a community, and to sell in parcels to settlers."<sup>10</sup> One

writer in 1900 said, "the impression has been circulated far and wide that in agriculture as in manufacturing, 'the big fish are eating up the little ones'; and that the independent small farm is a thing of the past," but he found nothing to support this idea so prevalent in the East. After visiting the Red River Valley he wrote: "The great estates of that region are doomed to disintegration. The great wheat ranch cannot compete with the small diversified farm. In agriculture the big fish are furnishing the food for the little ones."<sup>11</sup> "The bonanza farms did less in the way of adding material wealth to a few than in advertising the possibilities of the district. They were indeed demonstration farms. The results of the first few years were so satisfactory and widely advertised that thousands of the very best settlers from other states hastened to the Valley to establish a home."<sup>12</sup>

The large land holdings of the bonanza type which existed at one time in eastern North Dakota have ceased to be a factor of any importance. The interest in them is of an historic rather than an economic nature. Another generation will find them almost forgotten and in their place will be farms of a size suitable to diversified farming which is now making rapid progress. In western North Dakota, where much of the land can best be used for grazing, the representative economic farm unit will always be larger than in the east, and in many cases reduction in size of existing farms would be detrimental rather than beneficial.

<sup>9</sup> Coulter, "Industrial History of the Red River Valley of the North," *Collections of the State Historical Society of North Dakota*, Vol. III, p. 611, from C. B. Spahr, *America's Working People*, p. 251.

<sup>10</sup> Coulter, "Industrial History of the Red River

Valley of the North," *Collections of the State Historical Society of North Dakota*, Vol. III, 609; from *Country Gentleman*, 1880, p. 110.

<sup>11</sup> Coulter, *op. cit.*, p. 610, quoted from Spahr, *America's Working People*, p. 249.

<sup>12</sup> *Ibid.*, p. 583.



# INTEREST DURING CONSTRUCTION IN PUBLIC UTILITY ACCOUNTING

By JOHN H. BICKLEY

NO branch of accounting has been given more attention than that of common carriers and other public utilities. But in spite of this, one of the most interesting and significant accounts, "Interest during Construction," has failed to elicit the discussion which it merits. This account presents questions of the first magnitude, which bear materially upon the rights of the utility and its patrons.

In considering interest during construction, it is essential to distinguish between interest accrued or paid on borrowed funds and interest on the proprietary equity in construction. It has only been within comparatively recent years that interest paid on funds borrowed for construction purposes has been considered a part of the cost of property. An enterprise borrows money with which to construct its plant, an undertaking which might require several years. During the period of construction, interest must be paid, even though no revenue is accruing. To obtain a plant ready for operation, there must be paid, not only the cost of labor, materials, and equipment, but also interest on funds borrowed to finance the building operations. Money is worth its hire, and the compensation for the use of funds is now generally considered a legitimate cost of constructing the plant and putting it in readiness to operate. This principle, although at first it was accepted reluctantly by the conservative-minded who feared capital inflation, is now recognized for all types of business.

The unsettled problems of interest

during construction are found in connection with the proprietors' equity in the construction operation. These problems arise through (1) interest actually paid to stockholders during construction and before operations, (2) interest recorded only as a book entry on the stockholders' investment, and (3) interest on working capital used for construction, or additions and betterments, after the beginning of operations.

## *Provisions of Various Classifications*

An examination of the uniform classifications of accounts prescribed by the various state public service commissions, the Interstate Commerce Commission, the Federal Power Commission, and those recommended by national associations of utilities reveals that they agree in charging to fixed capital interest paid on moneys borrowed for construction. But such agreement by no means exists with respect to interest on the proprietary equity.

There are two general types of "Interest during Construction" accounts prescribed by state and federal commissions; the first may be identified as the "comprehensive," and the second as the "restrictive," or "indefinite." The "Interest during Construction" account in the Federal Government classifications is comprehensive in scope and covers all forms of interest. The same is true of the classifications adopted and promulgated by the utility associations. The account prescribed in the Interstate Commerce Commission Classification

for Steam Roads being representative of, in fact the model for, the more liberal type of "Interest during Construction" account, it may be quoted in full.

When any bonds, notes, or other evidences of indebtedness are sold, or any interest-bearing debt is incurred for acquisition and construction of original road and equipment, extensions, additions, and betterments, the interest accruing on the part of the debt representing the cost of property chargeable to road and equipment accounts (less interest, if any, allowed by depositaries on unexpended balances) after such funds become available for use and before the receipt or the completion or coming into service of the property so acquired shall be charged to this account.

When such securities are sold at a premium the proportion of such premium assignable to the time between the date of the actual issuance of the securities and the time when the property acquired or the improvement made becomes available for service shall be credited to this account.

This account shall also include such proportion of the discount and expense on funded debt issued for the acquisition of original road, original equipment, road extensions, additions, and betterments, as is equitably assignable to the period between the date of the actual issuance of securities and the time when the property acquired or the improvement made becomes available for the service for which it is intended. The proportion of discount and expense thus chargeable shall be determined by the ratio between the period prior to the completion or coming into service of the facilities or improvements acquired and the period of the entire life of the securities issued.

*This account shall also include reasonable charges for interest, during the construction period before the property becomes available for service, on the carrier's own funds expended for construction purposes.<sup>1</sup>*

In contrast to the comprehensive Interstate Commerce Commission account, which specifically describes the elements of interest to be charged to investment in property, is the less definite "Interest during Construction" account found in

the classifications of a number of state commissions. The account prescribed by the Public Service Commission of Pennsylvania is typical of the indefinite form.

Charge to this account the interest accrued during the period of construction, *upon all moneys and claims payable upon demand*,<sup>2</sup> which are acquired by the utility for use in connection with the construction of its electric system.

In case the utility incurs discount and expense in connection with debt which it issues for construction purposes, it may charge to this account that proportion of the discount and expense which the period prior to the completion of such construction bears to the entire life of the debt.

Interest receivable on such moneys and claims shall be credited to this account.

Discounts received through the prompt payment of bills for materials and supplies used in construction shall be credited to this account if they cannot be assigned to the particular items of materials and supplies to which they apply.<sup>3</sup>

The fundamental difference between the two types of accounts is on the question of interest on the utility's own funds used for construction purposes. The Interstate Commerce Commission classification makes specific provision for charging such interest to property, whereas the Pennsylvania classification makes no reference to this form of interest. No reference being made in the latter classification, the exact meaning of the account is open to interpretation. The stipulation that there is to be charged "interest accrued during the period of construction, upon all moneys and claims payable upon demand" appears to restrict the account to interest which arises from debt obligations, and to exclude interest on proprietorship funds. On the other hand, the failure to mention the latter may lead to the

<sup>1</sup> Italics mine.

<sup>2</sup> Italics mine.

<sup>3</sup> Account "296" of "Uniform Classification of Accounts for Electric Companies."

assumption that the account is indefinite and subject to interpretation one way or the other. Whatever the exact meaning, the problems of interest, enumerated above, on a company's own funds may be judged upon their merits.

Before attempting to point out the advantages and disadvantages of charging interest on the utility's own funds, there must be an understanding of what these funds include. A company's own funds are those in which it has a proprietary equity, and those available for construction operations are the proceeds of stock sales and working capital not required immediately for operating purposes. These funds are distinguished from the proceeds of the sale of bonds or issues of other forms of corporate indebtedness, the interest on which is contractual and must be paid from the date the indebtedness is incurred.

#### *I. Interest Paid to Stockholders before Operations*

The first questionable form of interest on the utility's own funds used for construction is interest actually paid to stockholders during construction and before operations. This is illustrated by the financial plan of the Philadelphia Electric Company for the construction of the Conowingo hydro-electric plant on the Susquehanna River at Conowingo, Maryland. The estimated cost of this plant is approximately \$52,000,000, not more than 75% of which is to be financed by a bond issue, and the balance by issues of first and second 8% preferred stocks. The Philadelphia Electric Power Company, a subsidiary corporation whose securities are to be issued to finance the undertaking, is to sell the two classes of preferred stock on an instalment basis. These instalments are to be paid during the progress

of construction and are to bear 6% interest during that period. This will necessitate, by contract agreement, cash payments for interest to stock subscribers prior to the operation of the plant. In effect, the stock subscribers are placed, during the construction period, in a position, with respect to return on their investment, similar to that occupied by the bondholders. After the plant is operating and earning a profit out of which dividends might be paid on the preferred stock, the payment of a return will be within the judgment and discretion of the board of directors. This plan creates the anomalous condition of making a return to the stock subscribers obligatory before profits are realized, and optional after they are earned.

The proposed procedure of the Philadelphia Electric Company is cited because it is typical of the method of corporate financing being employed for large projects.

Let us now examine the true nature of the financial and accounting program and see its ultimate effects. Until recently, the weight of sound business judgment was preponderantly opposed to paying a return to stockholders during the construction period, or prior to profitable operations. The stockholder's initial capital being his original investment, the payment of a return to him before a profit had been earned was regarded, for all kinds of business enterprises, as an impairment of that capital, for which, in some states, the directors were personally liable. No income return was to be paid on the proprietors' investment except out of earned profits. Even today, among manufacturing and mercantile enterprises, no prudent board of directors would delude themselves or their stockholders by paying interest on stock instalments during construction

and prior to successful operations. It is difficult to understand how a gain can be made, in a form for paying interest or dividends on stock, before a dollar of revenue has been received. Neither can it be seen how the legitimate claims of the stock subscriber are changed by an arrangement calling for the payment of interest before the stock certificates are issued and before the plant is operating to yield profits.

On the face of the plan, capital will be attracted more easily by the inducement that the stock subscriber will receive a contractual return of 6% during construction, and it is this inducement which the corporation aims to set forth. But those who analyze the proposal clearly will sense the result of their being given a return before a cent of revenue has been enjoyed. They will see that the interest is illusory rather than real—that they are merely having returned to them part of what they invested in the business. A payment to stockholders or subscribers (the difference is not material) is one of two things—a return on investment or a return of investment. It is obvious that there can be no return on proprietary investment until profits have been earned. Therefore, the so-called “interest” must be a return of investment.

Since the interest paid to stock subscribers does not constitute an income return, then what is accomplished? The substance of the plan is, that the stockholders acquire their holdings at a discount, and the discount is capitalized by being added to the book value of the property through the charge to “Interest during Construction.” The appearance of either a discount or an impairment of capital is avoided by creating the fiction of an addition to property. Nevertheless, the stockholders’ funds available for construction are

reduced by the amount of the interest paid on the instalments.

Every classification of accounts for public utilities clearly prohibits adding to fixed capital any discount on capital stock, but this is indubitably circumvented by the plan under discussion. A classification of accounts for public utilities which allows the payment of interest on stock subscribers’ instalments during the period of construction and before profits have been realized, and the charging of this interest to fixed capital, is lending itself directly to a vicious principle. The seriousness of the offense is accentuated in those states which prohibit public service corporations from selling their stock at less than par.

Furthermore, if the stockholder receives interest during construction, he profits in two ways: He enjoys his return before operations; and, after operations are commenced and profits realized, he receives a return on this return. This happens because interest paid during construction is added to the fixed capital on which the utility is permitted to earn a certain sum. If the allowed return is 7%, this amount accrues for the benefit of the proprietors. By reason of the “Interest during Construction” account as an element of property investment, there is accrued to the stockholder’s equity, or given to him through dividends, over a period of 14 years, a sum equal to the initial interest payments—that is, the initial return doubles itself every 14 years. Thus, the stockholder eats his cake and keeps his penny.

It must be concluded that the rights of the consumer are violated if he is required to pay, through rates, interest on the interest received by the stockholder during the period of construction. If payments are made to



stockholders before profits are realized, the true nature of the payments should be stated by charges to discount on capital stock or to a similar account. In case the stock is sold at a premium, the "interest" to subscribers during construction should be charged to "Premium on Capital Stock." This would avoid a capitalization of the payments and would save the consumer from any unfair burden.

## *II. Book Interest on the Proprietary Equity in Construction*

As substantially the same principles apply to the two remaining conditions under which interest is charged on the proprietary equity in construction, the two may be considered jointly. In review, these conditions are (1) interest recorded only as a book entry on the stockholders' investment and (2) interest on working funds used for construction, or additions and betterments, after the beginning of operations. If a utility were to issue stock to aid in financing a project and did not pay interest or dividends during construction, the recording of theoretical, or implicit, interest as a construction cost would create the same problems and involve the same principles as those of a going concern when it charges interest on its working capital used for additions and betterments.

In case interest is recorded only as a book entry, there is no actual payment to stockholders. The utility has available for productive assets all of the stockholder's commitment. The charge to "Interest during Construction" is made for the purpose of showing implicit interest as an element of property cost. Thus, the stock is not in reality issued at a discount, and the addition of the interest to the rate base does not

cause the patron to pay a double return.

In discussing accounting procedure, consideration must be given to the fundamental economic and legal differences between public utilities on the one hand and manufacturing and mercantile concerns on the other. These two groups may not be placed in the same category, because one is subject to certain restrictions imposed by government regulation, whereas the other possesses a wider range of freedom. Out of the economic and legal differences there arise differences in accounting principles and procedure. When a stockholder invests his capital in an industrial, he does so with the knowledge that the company's earnings will not be limited to a certain percentage by direct government action. In contrast to this, the investor in a public utility makes his commitment with the realization that the earnings of the utility are subject to state control, that the business may not charge all the traffic can bear, and that profits are not unlimited. After a manufacturing industry begins operations, it can compensate the stockholder for his loss of income during construction to any extent, depending only upon the profit-making capacity of the business.

In an industry in which the price charged for the product is unregulated, there is little or no relation between the cost of the property and the prices which may be fixed. For this reason, a careful accounting for investment is not of major importance, and a failure to record every element of cost, hypothetical or real, causes no loss in income. In the field of public service companies, however, the reasonableness of rates charged for service is passed upon by a regulatory body, and the standard by which rates are judged is a "fair return on the fair value of the property used and useful in the public service." As



statutory laws and court decisions stipulate original cost as one of the determinants of "fair value," the prosperity of the enterprise is largely dependent upon the inclusion of all the elements of property costs.

It becomes clear, therefore, why accounting for property investment is of vital significance to the public utility. The tendency in public service company regulation is to resort more frequently to the accounting records as a guide. With an acceptance of prudent investment as the basis of a reasonable return, there would be an unprecedented emphasis upon the book records of fixed capital. In fact, accounting would become the keystone of regulation, and the maximum of accuracy and completeness would be necessary.

Fairness demands that, in consideration for the restrictions imposed upon its earnings, the utility must be allowed to charge to fixed capital book interest on its own funds used for construction. So long as the policy does not lead to a double return to the corporation or its stockholders, interest on proprietary funds is a legitimate cost of property. This is particularly clear in the case of working capital used for additions and betterments. If the surplus funds were not required for these purposes, they would receive their hire by being invested in interest-bearing securities or by being placed on time deposit; that is, if the utility itself had no immediate need for the money, the funds would be committed to the use of others who would be willing to pay a return. On the other hand, if the utility lacked funds for development, it would be obliged to borrow from others and pay interest, and the interest outlay would be charged to fixed capital. The inescapable conclusion is that a charge should be allowed for interest during

construction on the utility's own funds, when the charge is not accompanied by interest payments to stockholders. The proprietors would be denied a return during the period of initial construction, but by adding implicit interest to property, the corporation would receive an annual return on the capitalized interest.

### *III. Meaning of Construction Period*

Having examined the conditions under which interest may be treated as a part of fixed capital, we must turn to the determination of the amount to be charged on the proprietary equity. The Interstate Commerce Commission Classification for Steam Roads provides that interest during construction, "shall also include reasonable charges for interest during the construction period on the carrier's own funds used temporarily during such period for construction purposes." The major points in this provision are, first, the length of the construction period, and, secondly, a reasonable interest charge, or rate of interest.

What is the period of construction? This question cannot be answered categorically. The determination of the length of the period is, for certain public service companies, a problem of major importance, and one involving both private and public interests. This applies especially to the construction of a railway or of a large hydro-electric plant. Perhaps years before actual construction work is started, large sums must be expended on preliminary engineering surveys; on investigating economic conditions and possibilities in order to determine the feasibility of the undertaking; in acquiring rights of way and options on land, or in making purchases in fee simple; and in forming a

business organization to promote and conduct the enterprise. Hundreds of thousands of dollars may be expended before a cubic yard of dirt has been excavated, or before a rail has been laid. An interim of years might elapse between the first measures and the beginning of actual construction work. After the preliminary steps have been taken, it might be concluded that further steps at that time would be premature and inexpedient. Development is halted until the territory has increased in population and industrial activity, or until there exists a larger and more certain demand for the service. During this period of suspension, funds are tied up and capital is dormant.

Should interest be accrued over this protracted period and added to the sum on which the consumer might eventually be called upon to pay a return, through rates? It seems unreasonable to impose this burden upon the public. But viewed from the standpoint of the industry, the early outlays were essential to bring the service into existence. The promoters exercised a degree of judgment and foresight which could reasonably be demanded; but, in their desire to create wealth and earn profits, they were in advance of their opportunities.

The Philadelphia Electric Company's hydro-electric project, already referred to, dates back to 1883, when the Susquehanna Water Power and Paper Company of Hartford County, Maryland, was organized with the right to manufacture paper from pulp, and to develop, maintain, utilize, and dispose of any water power owned or acquired by the company. Chronologically, the incorporation of this industry might be considered the first link in the chain of events which has culminated in the present undertaking. Should "Interest during Construction" on the power devel-

opment, proposed in 1925, be charged with interest accumulations dating back 42 years? Can this be considered a reasonable period of development, and is it a part of the construction period contemplated by the Federal Power Commission account?

In the opinion of many public utility accountants, the period on which interest should be allowed dates from the first expenditure and extends through the period of development and promotion, irrespective of its length. A more literal interpretation of "construction period" might necessitate drawing a line between promotion and preliminary development and the actual construction. However, in meeting actual conditions, locating the line is a perplexing question. A definition of the construction period should have sufficient flexibility to permit corporate officers and public service commissions to exercise their administrative judgment.

The construction period might be defined as the reasonable time required to make all preliminary investigations, acquisitions, and arrangements for going forward with construction, in addition to that required to construct the property and put it in readiness for operations. The period should begin on the date on which continuous expenditures are commenced for the investigation of the engineering and general business conditions; it should continue through a reasonable length of time required to complete the preliminary measures, to acquire necessary properties, and to build the plant; and it should terminate with the completion of the project, ready for operations. Delays occasioned by premature exploitation, by palpable errors in judgment, by lack of capital, or by inefficient construction methods, should not be included in the period of construction. There should be evidence

that all steps were taken with the reasonable dispatch to be expected on the part of those engaged in promoting and rendering a public service. Delays occasioned by forces and conditions which are beyond the control of, and which could not ordinarily be guarded against by, the managers of the undertaking, and which might have caused delay under any other management, should be included in the construction period.

In the last analysis, a reasonable time for development and construction is a question to be decided by the public regulatory body after a careful review of all relevant facts. To this end, it would appear desirable for a public service commission to issue orders defining, in a general way, its interpretation of the period of construction, and stipulating that all development and construction operations requiring more than a certain period of time should be referred to the commission, for decision as to the reasonableness of the time on which interest may be charged. The commission should reserve the right to pass upon the interest period for all construction jobs.

#### *The Rate of Interest on Construction Work*

The second factor in charging interest on proprietary funds is the rate of interest. The only requirement in the Interstate Commerce Commission account is that the charge shall be reasonable. The purpose of the property-investment accounts is to record the cost of fixed capital. This indicates that the interest charge should not exceed the legitimate cost to the utility incident to the use of its funds for construction. In November, 1923, the Federal Power Commission sent to the committees on accounts and statistics of the National

Association of Railway and Utilities Commissioners and the National Electric Association a letter asking for suggestions on the question of interest during construction with respect to a certain case. Accompanying this letter were the suggestions of William V. King, chief accountant of the Federal Power Commission, in which he said:

The actual legitimate cost to the licensee may represent the loss or sacrifice, if any, in income from the funds due to their use for construction purposes, and may be measured by what the funds would have earned or saved had they been retained and used in operations, or what they would have earned had they been safely and conservatively invested in interest-bearing securities. In some cases, perhaps, the cost may be represented by what the licensee would have had to pay as interest had the funds expended been borrowed; or conditions may be such that there will be no actual legitimate cost, and consequently there should be no charge for interest. The latter situation may arise where the funds expended constitute a part of working funds on which a fair return is being earned in operations.

An analysis of this statement shows three distinct methods of measuring the cost:

1. The loss or sacrifice in income as measured by what the funds would earn or save if used in operations;
2. The loss as measured by what the funds would earn if "safely and conservatively invested in interest-bearing securities";
3. What would have to be paid as interest if the funds were borrowed.

The procedure for applying these different yardsticks is not explained. The first standard for measuring the interest cost does not appear practicable. With the exception of the proceeds of stock sales intended for construction, the proprietorship funds used for additions and betterments are those not required for operating purposes. Therefore, it may be assumed that, if the surplus funds were not used for construction, they would be idle or else

placed on interest, and there would be no loss or sacrifice, as a fixed capital charge, to be measured. If there were a demand for a larger output, the working capital would be used in this way; and any funds required for improving or enlarging the plant would be obtained from another source.

The second measure is the percentage return on safe and conservative interest-bearing securities. This method could readily be applied. Any difference in the rate would be due primarily to differences in investment qualities. One of the largest electric utilities in Pennsylvania uses the rate of interest which it receives on time deposits. This is manifestly a highly conservative practice. Another utility uses a rate which it receives on investments in the securities of other corporations. The basic objection to the latter method is that it leaves too much room for unreasonable suppositions and individual opinion. The management which was bent on raising its costs to the highest point might claim that, if the funds had not been used for additions and betterments, they would have been invested in a certain class of securities yielding a relatively high rate of interest. If the allowance was, as a standard of measurement, the rate which the funds would earn if "safely and conservatively invested in interest-bearing securities," it should be conditional upon the use of a conservative and definitely ascertainable rate, such as the rate on time deposits, the yield of United States Government bonds, or the discount rates of the Federal Reserve Bank in whose district the utility had its principal office.

The method which most nearly approaches actual conditions is the rate which the utility would be obliged to pay if the funds were borrowed. The legitimate cost of interest is the saving

effected by successful operations and prudent financial management, making available funds for construction. This standard applies equally to the proceeds of stock sales and to surplus working funds. It recognizes the usual means of financing construction work. The financial plan for construction depends upon the strength of the enterprise and the extent of the work to be performed. If a company possesses surplus working funds, these funds are used temporarily to finance the additions and improvements necessitated by normal growth. No cash payments for interest are involved. When a favorable market for bonds exists, application is made to the trustee of the authorized open-mortgage bonds for a delivery of bonds equal to a stipulated percentage of the cost of the additions and improvements, as evidenced by various receipts and vouchers. This procedure is covered by the trust indenture for the mortgage bonds and enables the utility to reimburse its treasury for expenditures made. After the outlays on property have reached a certain volume, there might be an additional issue of authorized preferred or common stock, for the difference between the total expenditures and the amount received from the sale of the bonds.

In case the utility does not enjoy surplus working funds, the additions and betterments might be temporarily financed by discounting or selling notes. After the bonds are "taken down" and sold, the notes are retired. This would necessitate cash expenditures for interest during construction, and there would be no question concerning the rate to be charged.

In the event that a large plant is to be built, as an electric-generating unit, a separate company is frequently organized as a subsidiary. A number of



agreements are entered into, among which is a contract for the exclusive sale of the power to the parent company, or else a lease agreement whereby the parent company is to take over and operate the properties. In either case, the parent corporation agrees to pay the operating expenses and interest on bonds and dividends on stock. The construction is financed by an issue of mortgage bonds equal to 75% or 80% of the cost. These bonds are guaranteed by the parent utility. The balance of actual cost is financed by an issue of non-voting, cumulative preferred stock, purchased by the parent corporation. In exchange for services rendered in effecting the organization and contributing in other ways to the project, common stock, equal to or amounting to a certain percentage of the preferred stock, is issued to the organizing company. This stock might, in reality, constitute a bonus on the preferred, but is held for the purpose of controlling the subsidiary. When all plans, engineering and financial, have been completed, the bonds are sold to an underwriting broker, an associated branch of whose service is usually made the trustee for the mortgage. The proceeds of the sale are held by the trustee, and deliveries of cash are made as construction work progresses. The unexpended balance held by the trustee draws interest which offsets the interest accrued and paid on the bonds from the date of their issue. Again, there is no question concerning the rate of interest to be charged.

As these are the common methods of financing construction, an equitable interest charge should be predicated upon them. The growing enterprise issues its securities annually and is able to calculate an average interest cost for fixed capital expenditures. For exam-

ple, if bonds are issued for 75% of the cost of construction, and if the bonds at a certain time sell on a 5% basis and the preferred stock on a 6%, the interest cost on \$100 of capital would be \$5.25, and the average interest rate would be  $5\frac{1}{4}\%$ .

The use of this method would result in a rate varying with the general level of interest and the financial and operating condition of the utility. It would be definitely related to the facts and would violate neither private nor public rights. But, as in determining the period of construction, public service commissions should stipulate that the implicit rates charged on expenditures exceeding a certain amount are subject to commission approval. The regulatory body could maintain additional supervision by providing, in the annual reports which it receives from utilities, a schedule calling for the interest charged on the utility's own funds, the rate or rates, and a statement of how the rates were decided upon. This schedule should be incorporated irrespective of the method employed in determining the interest.

Mr. King's thought that, where the funds expended constitute a part of working funds on which a fair return is being earned in operations, there would be no interest cost, may be construed to mean that, if the utility is earning a fair return on its fixed and working capital, no interest should be allowed on working funds used for construction. This is an equitable provision. If the consumer is paying, through rates, an adequate return on the utility's capital, he should not be burdened with an additional sum by the capitalization of interest during construction. This would constitute a double charge—the first as an operating return on capital, and the second as capitalized interest.



*Recording Interest during Construction*

According to the Interstate Commerce Commission's classification, all interest actually paid or theoretically accrued is to be charged to the same account. This means that, after the different forms of interest are recorded, they can be distinguished only by an analysis of "Interest during Construction." In view of the fundamental difference between interest paid on borrowed funds used for construction and implicit interest accrued on the utility's own funds, these two classes of interest should be entered in two distinct interest accounts. The first account should be called "Interest during Construction on Borrowed Funds," and the wording should be the same as that given in the present Interstate Commerce Commission classifications, except that the paragraph pertaining to interest on utility funds should be omitted. A suggested title for the second account is "Interest Accrued on Proprietary Funds." In brief, there should be charged, to the latter account, theoretical (or implicit) interest during construction on the utility's own funds used for construction purposes. This segregation would provide, at all times, a differentiation between interest paid or to be paid on contractual equities and interest accrued as a book entry on the proprietary equity. As suggested above, the charges to "Interest Accrued on Proprietary Funds" could be explained, in the annual reports to the regulatory body, by a schedule setting forth the source of the funds (such as stock issues or working funds), the amount expended, the construction period, the rate of interest

applied, and the interest cost. A statement could also be given, showing the method used in determining the interest rate.

The Interstate Commerce Commission classifications do not indicate the credit entry in recording implicit interest on proprietary funds, but interpretations provide that it shall be made to the nonoperating income account, "Income from Unfunded Securities and Accounts." This is a most unfortunate suggestion and one charged with financially dangerous consequences, which are to be deplored. The effect would be the carrying of unrealized income to profit and loss, combining it with realized profits, thereby making it available for dividends. In no sense can this book credit be construed as earned profits out of which a distribution to stockholders should be made.

In order to guard against a distribution of the book credit to stockholders as a dividend, a sounder procedure, from the standpoint of both accounting and finance, would be to credit a proprietary or surplus reserve, such as "Reserve for Interest during Construction." This would serve to show, on the balance sheet, the implicit-interest element in fixed capital and, by appropriate restrictions in the account, would prevent a payment of dividends out of unrealized income.

In closing, it may be remarked that, if accounting is to become the key to effective economic control, and if it is to be accepted as pointing out the reciprocal rights and duties of the utility and the consuming public, it must not contribute to unfair and financially dangerous operations.

## THE LANDLESS AGRICULTURAL LABORER IN ITALY

By ASHER HOBSON

IN our own country the agricultural wage-earner possessing a reasonable degree of thrift, industry, and intelligence may look forward with considerable assurance to the possibility of becoming permanently attached to the soil in the capacity of an operating tenant, and in time to ownership of the land which he tills. Hence, it can be truly said that the United States has no landless agricultural laboring class. In this our nation is fortunate. Observations in Europe lead one to conclude that the continued welfare of a nation demands that economic conditions be such as to encourage the agricultural worker to aspire to land ownership.<sup>1</sup>

Such conditions do not prevail in many countries of Europe where opportunities for employment are more limited, where the remuneration of an agricultural laborer does not permit other than the exceptional worker to acquire landed property, where by habit and custom occupational barriers are difficult to hurdle, and where education is not so widely diffused among the masses. Because of limited educational facilities, a worker must, of necessity, follow the trade which he knows best by experience. This is generally the trade of his father. It is difficult for an American to realize that in some

countries if one be born in the family of an agricultural laborer, the chances are that one will also be an agricultural laborer. In no country is it as easy as in America to shift from one occupation to another.

In the United States there is considerable concern in some quarters because young people are drawn from the farm in large numbers to fill the ranks of industrial workers and the professions. This movement tends to cause a scarcity of farm labor, and, as a result, our farms are, in a large measure, tilled by the farmer and his family without recourse to outside labor. This trend from farm to city is the result primarily of two causes: (1) a strong demand for workers in the industries and favorable opportunities in the professions; (2) an economic and social environment on the farm which permits the farm-reared to fit themselves, educationally, for the occupation or profession of their choice.

In my mind, universal education is the surest vaccine against the formation of a peasant class and its accompanying low standards of living on the farm. Peasant farming, with its extravagant use of farm labor and its small return per worker, is the result of economic conditions which force people to remain upon the land regardless of their occupational desires. Farming is lifted to the position of a chosen life work and to the dignity of a profession only when a goodly portion of the men who till the soil, and a goodly portion of the women who manage the farm homes have had

<sup>1</sup> In the preparation of this article, the author has drawn freely upon the published results of an inquiry conducted by the Minister of Agriculture entitled *Due Relazioni al Comitato tecnico dell'Agricoltura*, also from the publication of Arigo Serpieri, former Under-Secretary for Agriculture, entitled *Studi sui Contratti Agrari*.

the advantages of fair educational facilities, and when the sons and daughters of the farm have sufficient schooling to permit the following of an occupation of their own choosing. Under such circumstances, choice is an important factor in placing people on farms. Certainly, they are not there largely as victims of circumstances over which they have no control.

On the whole, one may say that the American farm youth may follow the calling of his choice. While this condition may cause a scarcity of farm labor during certain seasons to the inconvenience of the individual farmer, it tends to elevate the economic prosperity of the farmer and thus promotes the welfare of the nation.

In general, the greater the number of farm workers, the less the returns to the individual worker. This axiom is strikingly emphasized by comparing the outstanding characteristic of European agriculture with that of American agriculture. In Europe, land is scarce and labor is cheap. Hence, much labor is applied to a little land. The result is a high product per acre, but too often there is a mere subsistence for those who actually do the work. Land in America is relatively plentiful, while farm labor is comparatively scarce. Hence, labor is made to cover more land. Here the result is a relatively low return per acre, but a higher production per man. This is a fact too often overlooked by the train-window observer who bewails the extensive methods of the American farmer.

It is to the interest of the American farmer and of the nation that individual returns be not sacrificed to an increased return per acre. This statement does not mean that all increased returns per acre tend to reduce the earnings of the individual worker. Improved

methods tend to increase returns per unit of labor as well as per unit of land. The point to be emphasized is that a surplus of agricultural labor tends to reduce the earning capacity of the individual worker. Since the American farmer serves in the capacity of a laborer as well as an operator or landowner, and since a substantial portion of his income is a return for labor, it is highly essential that his labor returns be not adversely affected by a surplus supply of farm labor. Hence the conclusion that the welfare of the farmer and of the nation is promoted by the environment which permits the country youth to choose with ease the occupation of his preference, rather than being forced to remain upon the land.

As long as this condition obtains, America will not be burdened by a permanent agricultural laboring class. America has no such class and it is highly desirable that all necessary precautions be taken in order to prevent the formation of such a class. Certainly the peace of a countryside is endangered when a considerable portion of the population is connected with the land only through the wages its members receive.

The agitations of the agricultural laborers of Italy furnish striking examples of conditions to be avoided if a country is to enjoy a healthy agricultural development. The only purpose of presenting this discussion to American readers is the hope that a description of the experiences of another country may serve to emphasize the need for clear thinking in the adoption of policies affecting the future trend of agriculture in the United States, in order that America may avoid some of the economic and social conditions which elsewhere seem to defy solution.

### *The Number of Agricultural Wage-Earners in Italy*

The last published occupational census for Italy pertains to the year 1911. At that time there were around 4,600,000 persons above 10 years of age employed on farms in the capacity of laborers. To this number may be added another 240,000 who were classed as herdsmen and shepherds, bringing the total number of wage-laborers on the land to over 4,800,000 in a nation having a population at that time of 34,671,000 people. In other words, nearly one-seventh of the entire population consisted of landless landworkers. This does not portray the exact condition, for there were, in addition, about 1,500,000 crop-sharing tenants, many of whom operated under a form of lease conveying to the tenant a status little different from that of an agricultural laborer.

The notable fact is that, of the 4,600,000 reported as farm laborers, 4,200,000 were casual laborers who worked by the day. To place the problem in a different light, fully one-eighth of the total population in Italy in 1911 was forced to seek work as day-laborers upon farms, with little hope of being able to settle permanently upon the land in the capacity either of operator or owner. Although these facts pertain definitely to 1911, there is no reason to believe that the same relative conditions do not prevail today.

### *The Class Struggle of the Agricultural Laborer*

The Italian agricultural laborer has done much to better his conditions. But today he presents a difficult economic and social problem to the nation. In order to understand present conditions,

it is necessary to trace the high lights in his class struggle.

Thirty years ago the landless agricultural workers employed by the day on farm and land reclamation work were miserably poor. Their wages fluctuated around 25 cents a day; their food consisted largely of corn mush, often made with corn of low grade. As a result, the terrible disease of *pellagra*, leading to feeble-mindedness and insanity, was a scourge of North Italy, more especially of the Venetian and Emilian provinces, but it had also spread through central Italy. These conditions led to serious agrarian agitations in the nineties. In the south the outlet was found in emigration. In the north the trade-union movement, which took root in Italy in those years, spread to the countryside.

Of the agricultural laborers as a class, the poverty-stricken day-laborer was the first to turn to class organization as a means of improving his conditions. He soon gained the interest and support of those employed on a monthly and yearly basis, as well as those employed as herdsmen.

By means of organized efforts which freely employed the strike and, unfortunately, in all too many instances, resorted to violence involving bloodshed and destruction of property, the laborers' organization—The Peasants League—in certain sections gained a position of domination, and in some cases it entirely monopolized the farm labor market.

Conditions and hours of work and wages were prescribed by the organization. These were passively accepted by the unorganized landowners and employers of farm labor.

While the League was able to fix its terms and rates of employment, which the landowners and operators were helpless to reject, the organization



found it most difficult to prevent action on the part of employers which nullified in a large measure the advantages gained.

The first move on the part of farm operators was to reduce to a minimum the employment of hired labor. This could be done by changing the type of crops grown. For instance, the growing of rice, requiring much labor, was profitable under the old wage-rates, but became less profitable under the wage-scales set by the organizations of labor. Hence, the area under rice was reduced. Crops requiring much labor gave way to crops requiring less labor. Acreage given over to grass was increased. Dairying was replaced by stock-raising. The use of machinery was increased, especially for harvesting purposes.

But perhaps one of the most effective steps against the laborer and his organization was the adoption of a system of crop-sharing tenancy whereby the tenant and his family supplied the labor, while the landlord furnished the land and most, if not all, of the equipment. The landowners found in this form of farming greater security against strikes. This move created a condition not unlike that existing in certain sections of our cotton belt, where much of the land is cultivated by the negro "cropper,"

whose economic status is little above that of a farm laborer.

The share tenant, in order to reduce his requirements for outside labor, resorted to exchange labor with other tenants during the harvest period.

On the large estates where the division of the land into family-sized farms entailed too great a cost, the tendency was for the landowner to replace the cash wage by a share in the crop. In this manner the worker with an hourly wage and no interest in the crop was replaced by one who participated in some measure in the results of the enterprise. Even in the case of herdsmen, payment in kind was largely substituted for the cash wage.

The reactions on the part of operators and owners reduced the demand for labor, which in turn brought about ever-increased demands from the workers for shorter hours and higher wages, in order that the reduced amount of employment would sustain the same number of workers.

Because of the practice of the landowners in substituting tenants for wage-earners, the workers manifested a keen aversion toward the share tenant during the period from 1900 to the beginning of the war. In many cases, their deeds of violence made the life of the share tenant a miserable one. The unions attempted to enforce measures designed to prohibit the exchange of labor between farms. They combined to purchase threshing machines and attempted to compel the landowners to use only the machines belonging to the unions.

The strike was a much used weapon of the laborers' organizations. An idea of their frequency and extent is shown in Table I.

Between 1900 and the beginning of the World War, and immediately following the close of the war, were the

TABLE I. STRIKES OF AGRICULTURAL LABORERS IN ITALY, 1881-1924

5-Year Periods	Number of Strikes	Number of Workers Involved
1881-1885.....	78	11,664
1886-1890.....	39	10,524
1891-1895.....	67	30,202
1896-1900.....	85	47,142
1901-1905.....	1,192	530,535
1906-1910.....	1,242	617,525
1911-1915.....	613	399,748
1916-1920.....	495	1,572,588
1921-1924.....	119	127,282
Total.....	3,930	3,347,210



periods of greatest strike activities. In 1920 there were 189 agricultural strikes, involving more than 1,000,000 workers.

### *The Economic Position of the Farm Laborer after the War*

In 1920 the agricultural laborer received from three to three and one-half times as much as before the war. On the other hand, the Italian lira was worth only one-fourth of its pre-war value. Although wages had not kept pace with the money depreciation, there is no question that the economic position of the farm worker was greatly improved as a result of his organized effort.

It is perhaps well to note in detail his economic status immediately following the war. The following conditions are those contained in agreements adhered to by the workers' unions and the land-owning employers. In the province of Emilia, the hourly wage for men engaged in heavy summer work was around 10 cents; in exceptional cases it rose as high as 12½ cents.<sup>2</sup> The hourly wage for ordinary work fluctuated around 7½ cents and in the winter-time the rate fell to 5 cents.

In the case of herdsmen, before the war, the number of milk cows entrusted to each in the province of Piacenza was from 12 to 14. This number was reduced after the war to 10. The payment in kind and in money was as shown in Table II.

<sup>2</sup> Unless specifically noted, the wages of laborers employed by the hour or day do not include board or lodging, which is furnished by the laborer himself.

<sup>3</sup> One hundred-nineteen square yards are equivalent to 100 square meters.

<sup>4</sup> Equivalent to 2,800 lire, the lira being worth about 5 cents in 1920.

TABLE II. WAGES OF HERDSMEN IN PROVINCE OF PIACENZA

ITEM	1914-1915	1918-1919
Wheat per year, bushels.....	28.87*	38.49†
Maize per year, bushels.....	38.49	38.49
Cash per year.....	\$43.57‡	\$217.44§
Faggots per month.....	60	60
Wine per day, quarts.....	2.1	2.1
Milk per day, quarts.....	2.1	2.1
Gratuity for each calf born.....	17½¢	12¢

\*28.87 bushels computed from 10.5 hectoliters.

†38.49 bushels computed from 14 hectoliters.

‡A lira in 1914-1915 was worth between 16 and 18 cents.

§A lira in 1918-1919 was worth around 12 cents.

||2.1 quarts (liquid measure) equals 2 liters.

The family of the herdsman had free use of a three-roomed cottage, a vegetable garden of 119 square yards,<sup>3</sup> a pig-sty, and the right to keep a pig. He also had a right to cultivate on a crop-sharing basis as much land as his family was able to tend in a husband-like manner. The crops were shared at the rates shown in Table III.

Plowmen were required to look after and lead a single pair of oxen in the performance of their work. Their compensation was the same as that noted above for herdsmen, with the exception that they did not receive a milk allowance.

In the province of Parma the 1920 labor contract for permanent salaried workers prescribed that those caring for live stock should be entrusted with a maximum number of 12 animals. The annual wage was \$140.<sup>4</sup> They had free use of cottage, pig-sty, and vegetable garden. They were permitted to keep a poultry run, or alternatively were paid

TABLE III. CROP SHARES OF HERDSMEN IN PIACENZA

ITEM	1914-15	1918-19
Sugar beets per 100 pounds.....	4 cents*	12 cents†
Tomatoes per 100 pounds.....	12	22
Maize (share).....	¼	2/9

\*The equivalent of ¼ lira per quintal (about 220 pounds).

†The equivalent of 2.20 lire per quintal.

\$5. They had a right to glean the fields or alternatively to receive \$2.50. They had the use of five-sixths of an acre<sup>5</sup> of land, sharing the crops half and half, and received a milk ration every day. The total hours of work were a minimum of 6 hours in the months of January and February and a maximum of 10 hours in the months of May to July. Overtime was compensated at the rate of 8¾ cents an hour.<sup>6</sup> Seven days in the year were given as holidays besides Sundays.

Permanent wage-workers who were not employed in handling live stock enjoyed the above conditions, but their wages were \$130,<sup>7</sup> and they received no milk. Dairy hands were entrusted with no more than 10 or 12 milk cows for each man. The conditions were the same as those for workers employed in handling live stock, but their wages were \$155<sup>8</sup> a year.

In the province of Reggio Emilia, the labor agreement with permanently employed plowmen and farm servants provided for the rates given in Table IV.

Besides this they received 2½ cents (50 centimes) for every 220 pounds (1 quintal) of milk, 5 cents (1 lira in 1920) for every calf that was born, 10 cents (2 lire in 1920) for every head of cattle which was sold, 1 pint (one-half liter) of milk a day, 110 pounds (50 kilograms) of wheat during the harvesting season. They also were given the right to breed poultry and to work a garden.

In the province of Ferrara, in case the farm was worked by a herdsman who looked after the stables, and by permanent laborers who sometimes belonged to the family of the herdsman,

TABLE IV. WAGE-RATES OF PLOWMEN AND FARM SERVANTS IN REGGIO EMILIA

Free lodging, or.....	\$ 5.00 (100 lire)*
2,420 pounds† (40¼ bushels)	
of wheat, or.....	41.25 (825 lire)
2,420 pounds (43¼ bushels)	
of corn, or.....	33.00 (660 lire)
3,300 pounds of grapes, or....	30.00 (600 lire)
Hemp, beans, and wood to the value of.....	16.50 (330 lire)
Cash.....	45.00 (900 lire)
Total annual wages.....	\$170.75 (3,415 lire)

\*The lira was worth 5 cents in 1920.

†Eleven quintals; one quintal is equivalent to 220 pounds.

the agreement contained the following provisions: The herdsman was required to provide, without compensation, a boy as a helper. He was entrusted with a maximum of 18 head of cattle, of which 14 must be draft animals. He was provided with a cottage for himself and family, a market garden, facilities for raising poultry and pigs, some small compensations of a special nature, and an annual wage of from \$100 to \$105 (2,000 to 2,100 lire).

Other clauses in certain agreements forbade the herdsman to be employed on any work except that of caring for and leading his cattle. The exchange of work between farmers was abolished and each laborer was required to work only on the farm on which he was permanently employed. Special pay was given to the crop-sharing men if the yield per unit of area of certain crops fell below a fixed limit. All work of carting outside the farm was to be performed by professional carters, and all portage had to be done by casual labor employed for that purpose. These limitations granted to permanent labor were for the purpose of reserving some work for the day worker.

The eight-hour day was enforced by the unions. Overtime was compensated at an increase of from 25% to 50%

<sup>5</sup> One-third of a hectare.

<sup>6</sup> 1.75 lire. <sup>7</sup> 2,600 lire. <sup>8</sup> 3,100 lire.

above the usual rate. The maximum day including overtime was set at 10 hours.

### *Evidence of Strength of Laborers' Unions*

In order to measure the strength of the agricultural laborers' unions, it is well to note some of the drastic provisions which were in force in the different provinces.

In Piacenza the unions made the use of agricultural machinery conditional upon the full employment of all available labor, including female labor. In addition, all labor had to be engaged through the joint employment bureau consisting of representatives of the labor unions and the landowners. Another joint communal commission was also required to fix the minimum amount of labor which must be employed on each farm.

An agreement in the province of Reggio made it compulsory on the employers of labor to use help furnished exclusively by the joint labor office and to insure to each laborer a minimum amount of work based on the continuous employment of one person for every 15 acres of land.

The several agreements in force in the province of Bologna made it compulsory on employers of labor to engage only members of the unions. These

they had to secure through the unions' employment bureaus. If it became necessary to secure laborers from other districts, they also had to be recruited through these bureaus. A similar situation existed in the province of Ravenna.

Several agreements in force in the province of Ferrara contained a clause in which the farmers recognized the right of union labor to have precedence in employment. A joint commission was formed to secure an equitable distribution of the work among the different categories of labor, in accordance with a fixed order of precedence. It was also agreed that the use of machinery would be suspended when unemployment is prevalent.

In some cases, the control exercised on employment of labor went further than this. For instance, a decree of July, 1919, issued by the Prefect of Parma<sup>9</sup> established in each commune a commission presided over by the mayor, and having a membership composed of an equal number of representatives of employers and employees selected by the respective organizations. This commission was required to inspect all farms in the commune and enforce the necessary measures to insure the full cultivation under normal conditions of each farm.

<sup>9</sup> The Prefect justified his measure on the urgent need of securing a higher yield from the lands under cultivation in order to insure the highest possible production of foodstuffs. Following is a free translation of the important portion of this decree:

1. In the communes of the province which are mentioned in the following Article 6, there shall be established a commission presided over by the mayor and consisting of six members, of whom three shall be landowners or farmers, and three representatives of agricultural labor. The selection shall be made by their respective organizations. In case of refusal or failure to act on the part of the organizations representing either owners or workers, the mayors of the communes shall choose representatives from persons belonging to each category who are competent in matters of farming.

2. The commission is required to inspect the farms

in the commune which are inadequately cultivated through insufficient labor, or through failure to do work, or for any other cause inherent to the method of cultivation. Said commission shall then indicate necessary measures to be taken, such as the employment of labor or other means for insuring the complete and normal cultivation of the farm in question.

3. Should the members of the commission be unable to agree as to the measures to be taken and should it be impossible to secure a majority vote, the decision will be given by the director of the traveling instructors in agriculture. Should he fail to do so, the mayor himself will have the measures carried out.

4. The expenses incurred in carrying out these measures by the mayor's intervention will be recovered in the manner foreseen in Article 153 of the communal and provincial law, and will be charged to the owner of the land. Should the farm be leased on crop-sharing agreement, the cost shall be met half by the landowner and half by the tenant farmer.

5. Separate measures will set forth the names of the communes in which the measures contemplated in the present decree are applicable.

*Agricultural Wages in Italy, 1923-1924*

These measures are presented in detail to show the strength and influence of the laborers' organizations. The above agreements refer to the period immediately following the war, 1918 to 1920. These agreements are subject to annual adjustments, but little change has been made during the past five years in matters other than wage-rates.

Tables V and VI are a summary of agricultural wages for the crop year 1923-1924. These wages are based upon agreement between the organizations representing the laborers and those representing the employers. They differ, of course, in the different provinces. The following districts are chosen at random and give a good idea of the range of wages for the various types of work:

TABLE V. WAGES OF FARM LABORERS ENGAGED BY THE YEAR UNDER LABOR CONTRACTS, FOR THE CROP YEAR 1923-1924\*

DISTRICT	KIND OF WORK	ANNUAL WAGES		
		In Money		In Kind
		Dollars	Lire	
Alessandria	General farm laborers.....	\$19.32†	420	Wheat, 45.8 bu.† (12.50 quintals); corn, 49 bu. (12.50 quintals); house, poultry-run, pig-sty, and 240 sq. yds. (200 sq. meters) of vegetable garden, rent free.
	Herdsmen and stablemen.....	25.30	550	As above, plus 1 qt. (1 liter) of milk a day to herdsmen.
Novara....	General farm laborers.....	92.00	2,000	Rice, 660 lbs. (3 quintals); wheat, 11 bu. (3 quintals); corn, 35½ bu. (9 quintals); beans, 4½ bu. (2 quintals); green wood, 8,800 lbs. (40 quintals); house, as above.
	Dairymen.....	92.00	2,000	As above, plus 1 qt. (1 liter) of milk a day.
Tortona	General farm laborers.....	16.56	360	Wheat, 44 bu. (12 quintals); corn, 43 bu. (11 quintals); wine, 110 gal. (5 hectoliters); house, as above.
	Herdsmen and stablemen.....	16.56	360	Wheat, 45.8 bu. (12.50 quintals); corn, 47½ bu. (12 quintals); milk, 1 qt. (1 liter) a day.
Vercelli	General farm laborers.....	92.00	2,000	Wheat, 18½ bu. (5 quintals); corn, 27½ (7 quintals); rice, 660 lbs. (3 quintals); beans, 440 lbs. (2 quintals); house, as above.
	Foremen and under foremen	Additional wage over \$92 subject to personal agreement with employer		Same
	Dairymen.....	92.00	2,000	As above, plus 1 qt. (1 liter) of milk a day.

\**Bollettino del Lavoro e della Previdenza Sociale, Ministero del Economia Nazionale.*

†The lira, in 1923-1924, was worth about 4.60 cents.

‡For this and subsequent computations in English measures, see any table of metric weights and measures.

*The Present Trend*

The agricultural labor organizations have made much progress in Italy. But it has become quite evident that there

is a definite limit to the advantages which may be gained through efforts to secure higher wages and shorter hours. As has been indicated, the higher the wage, the greater the incen-

TABLE VI. WAGES OF DAY LABORERS ON THE FARM UNDER LABOR CONTRACTS, FOR THE CROP YEAR 1923-1924\*

DISTRICT	KIND OF WORK	WAGES PER HOUR		WAGES IN KIND
		In Cents	In Lire	
Alessandria (Agreement between the Association of Agriculturalists of Alessandria and the Federation of Workers on the Land)	Vineyard workers.....	\$0.06	1.40 (winter)	Wine to drink as required
	Vineyard workers.....	.07	1.60 (other seasons)	
	Vineyard spraying.....	.08	1.80	
	Vintage.....	.08	1.80	
	Wine-making.....	.10	2.20	
	Field hands.....	.059	1.30 (winter)	
	Field hands.....	.069	1.50 (other seasons)	
	Haymakers.....	.08	1.80	
	Harvesters.....	.08	1.80	
	Threshing.....	.08	1.80	
	Felling trees.....	.09	2.00	
	Women workers—50% of wages for above. Overtime—50% above standard wage for normal 8 hour day			
Novara (Agreement between the Nat'l Syndicate of Tenant Farmers of Novara and the National Peasants Syndicate).....	Adult men: 1st category (cutting, binding, harvesting rice).....	.11	2.50	
	2nd category (cutting, binding, harvesting and threshing rice).....	.097	2.12	
	3rd category (threshing and drying rice).....	.09	2.00	
	Hay-cutting; harvesting, binding, and threshing colza and rapeseed crops	.108	2.35	
	All other work.....	.08	1.75	
Tortona (Agreement between the District Agricultural Administration and the Fascist Syndicate of Workers on the Land)	Day workers employed on ordinary farm work:	Per Day	Per Day	1 qt. (1 liter) of wine a day during harvesting and threshing to all workers
	December-January.....	.345	7.50	
	November-February....	.40½	8.75	
	March.....	.48	10.50	
	April and October.....	.529	11.50	
	May, August, September.....	.575	12.50	
	June-July.....	.63¼	13.75	
	Special work:	Per Hr.	Per Hr.	
	Felling trees.....	.069	1.50	
	Haymaking.....	.069	1.50	
	Harvesting and Threshing.....	.078	1.70	
	Women workers—one-half the wages for men; two-thirds if man's work			

\*See footnotes, Table V.



tive for the farm employer to change his type of farming to one requiring less labor, or to rent his land on a crop-sharing basis, thus making the tenant and his family perform the labor. As a result, unemployment is a perplexing problem to the unions. The organizations have been able to secure higher wages and shorter hours for those actually employed, but the organizations are now at a loss to find effective means whereby the employers can be forced to utilize the available supply of labor. Unless the surplus is employed, competition among workers threatens to demoralize the power of the unions in enforcing the agreements already established.

As a result of this condition, the unions have been directing their ener-

gies during the last few years toward the collective leasing and collective farming of lands. This step is designed to strengthen the unions' powers of resistance in the labor market.

The movement toward collective leasing not only has had a far-reaching influence upon the status of the laborer, but it also has had a tendency to modify and to standardize the crop-sharing lease. Through this movement, the agricultural laborer has been able to enlist the sympathies of the share-tenant, and to organize him as a class against the landowner.

Cooperative leasing and cooperative farming form a new chapter in the agricultural labor movement in Italy. This phase will be treated in a subsequent article.

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# SOME ASPECTS OF THE GOING-VALUE CONCEPT IN UTILITY VALUATION

By MARTIN G. GLAESER

NO more perplexing problems exist in public utility economics than those connected with the valuation of properties. Some critics of current valuation procedure even go so far as to say that the entire valuation doctrine is ineffectual, illusory, and a costly burden.<sup>1</sup> Yet these problems must be faced if we are to continue public regulation of rates. There is probably no other single subject within the precincts of the valuation problem which raises more unanswered questions as to the fundamentals of regulation than does the subject of "going value" (often also called "going concern value"). It may be that on this account going value is the most fought-over element in valuation litigation. There is all the more reason, therefore, for introducing the subject and attempting to state some of the difficulties clearly.

An added reason is found when we reflect upon the functions of such valuation concepts as that of going value. Almost a generation ago the first state undertook the task of ascertaining what was then called the "physical value" of its railways. In working upon the problem, courts and commissions, together with those whose business it is to aid these bodies in their task, have set up certain concepts in the nature of working hypotheses. They have attempted to lend precision to their reasoning by working out a scientific terminology. The accountant, the engineer, and the

statistician have contributed of their art in order to reduce the voluminous detail to simple and understandable uniformities. And from day to day, in the monotony of the hearing rooms and in the workshops of the commissions, the work of fact-gathering, of systematizing, and of weighing arguments toward a reasoned conclusion is going forward. Far from thinking that this undertaking is in vain, we believe that out of these years of labor can come a foundation of fact, an adjudication of equities, and a basis even of compromise, upon which a regulatory structure can be based that will serve its purpose with increased efficiency in the future.

## I. Wisconsin Concept of Going Value

The formulation of "going value" by the Railroad Commission of Wisconsin is a good starting point. In the case of *Hill v. Antigo Water Co.*,<sup>2</sup> the commission dealt with a situation where it was possible to reconstruct a complete financial history of the company from the books. On this account the commission was able to rely largely on actual costs rather than on estimated costs in order to reach a conclusion. In this case the Wisconsin Commission first formulated its "going-value" concept and a method for quantitative measurement which is distinct from other formulations and which has since been relied upon by a number of other com-

<sup>1</sup> Henderson, G. C., "Railway Valuation and the Courts," *Harvard Law Review*, 1920, Vol. XXXIII,

p. 902.

<sup>2</sup> 3 W. R. C. R. 623.

missions.<sup>3</sup> There is no better way of explaining this concept of "going value" and the reasons why it should be considered in rate cases than in the words of the commission itself:

The cost of developing a business of water-works may be made up of many different kinds of expenditures. It may include the cost of advertising, soliciting, demonstrations showing the advantages of having water under pressure in the houses, or making free connections, of the granting of lower than the regular rates, and of many other outlays of this character in order to secure customers. It may also include losses to the investors because of the fact that the plants in their earlier years failed to earn enough to meet all the requirements for operating expenses, including depreciation and reasonable return upon the investment. If the direct outlays for securing business are charged to operating expenses, as they should be, instead of to the capital account, then the cost of acquiring a paying business would be represented by the deficits, or by the amounts by which the gross earnings fall short of covering the cost of operation, as stated, including fair returns to the investors.

Such costs or deficits are, generally speaking, unavoidable. Few, if any, plants are paying from the start. The only way in which many, if not most of them, can be made paying concerns at the start is apparently by having the city or taxpayers foot the deficit. Private customers cannot always be made to foot them, for the rates required to yield reasonable returns at the start, or while the business is light, are more than likely to be so high that rather than pay them the consumers would forego the service. Both of these methods of making up the deficits, therefore, would seem to be impracticable. It would seem to follow from this that early losses will have to be met by the investors. There is apparently no way in which this can be prevented.

But while such losses will have to be met by the investors, it is not expected that these sacrifices will be anything but temporary. The investors fully expect, and in most cases rightly so, that these losses will be made good as soon as warranted by the business of the plant.

They usually regard such deficits as an additional investment upon which, unless the whole amount is refunded to them in some form, they are entitled to the same returns as on the rest of their capital. Unless they are so compensated, it is manifestly clear that no money from private sources is likely ever to be invested for such purposes, except, perhaps, in a few rare instances, for philanthropic reasons. If there is not a reasonable assurance of reasonable returns upon the cost of the plant, it is manifestly clear that private investors will seek other fields. It is upon this basis only that such plants will be built at all, at least by private capital. Communities that are not willing to bear this expense are also likely to have to do without such conveniences as water under pressure, excepting in cases where the functions of the investors are assumed by the taxpayers through the construction of municipal plants. Even in the case of municipal plants it is necessary that the costs in question should be covered if permanent losses to the taxpayers are to be avoided. . . .

There are obligations and rights on the side of both the investors and consumers. It is the duty of the investors to furnish a reasonably efficient plant and management and reasonably adequate service. When these obligations are fulfilled, they are ordinarily entitled to a reasonable return upon their investment and services. It is the duty of the consumers to pay reasonable rates for the services they obtain, and they have the right to demand an efficient management and a reasonably adequate service. These matters are measured by the total investment made by the service as a whole. These elements should be considered together.

It thus appears that the cost of building up a business of a plant is in most cases as unavoidable as the cost of the construction of the plant itself; that such reimbursement is equitable as between investors and consumers; and that this is a just method of dealing with such costs for other reasons. If this is sound, it also follows that the cost of the business must also be taken into consideration in determining the value of the plants for rate-fixing purposes.

This would seem to apply with special force where by law the rates are limited so as not to yield more than reasonable returns upon the investment. While such legislation may not be a guaranty against losses of any kind, it is clear that if the rates fixed under these laws should not include anything for the cost of

<sup>3</sup> Maine, Indiana, Illinois, California, West Virginia, Arkansas, and others.

building up the business, there would be no way in which these costs could be made good to the investors. In that event, these costs would become a permanent loss to them; and the consumers, in turn, would be relieved from paying a reasonable return on a part of the investment or on the capital that is devoted to furnishing them with the service in question. This is a situation of which the investors are taking due notice, and which is entitled to due consideration. If not taken into account, it will tend to keep new capital from entering this field as well as to prevent exact justice to capital which has already entered the same. The former would result in hardships or inconveniences to the consumer; the latter would apparently be unjust to at least many of the present investors in such utilities.

Just how long it takes for a properly adapted and reasonably well managed plant to become self-sustaining is not entirely clear. Some reach this point within the first few years, others, again, require as many as ten or even more years, before they approach it. There are also those which never reach this point at all. Much depends upon the local conditions by which each plant is surrounded, and which vary from one place to another.

In order to determine the situation in this respect, it is therefore necessary to make a separate study of each particular plant, and of the conditions under which it was established and is operating. Where conditions are not favorable, the plants may never become paying enterprises. There are many reasons why, even under favorable conditions, it takes time to develop a paying business. The town, while growing, may not be large enough at the time. It may lack sewers and street-sprinkling systems. It may require less water for fire protection than was expected. It may have good wells for domestic purposes which the people are slow to abandon. These and many other conditions of a similar character often tend to keep the earnings of plants on a lower than normal basis for several years after they have been put into operation.

As to whether the cost of building up the business should be included in the value of a plant or gradually charged off from the earnings when these earnings become large enough to warrant it; or rather when they have so increased as to cover operating expenses, including depreciation and a reasonable return upon the investment, and, besides this, leave a surplus, may not be entirely clear. When

added to the original capital upon which interest and profits should be earned, it becomes a permanent charge upon the consumers. This charge, however, is low, as low, in fact, as it very well can be made. When gradually written off, it results in a high annual charge that will terminate when the cost has been wiped out. Either plan may be feasible. As to which one is preferable is a question that depends upon the circumstances in each particular case.

The later history of this concept of going value is interesting. In the Appleton Water-Works case<sup>4</sup> the commission dealt with a property which had never been profitable. As distinguished from the Antigo case this was a purchase case. The object of the proceeding was to determine "just compensation" and not a "fair value" which might serve as a rate base. The commission fixed the compensation at \$255,000, without naming a specific sum as the allowance for going value. From internal evidence, it is clear that the allowance was little more than nominal. It should be borne in mind that the business which had become attached to the plant had proved inadequate to pay even the interest on a mortgage of \$250,000, and the company was in the hands of a receiver. The case was carried, on appeal, to the Supreme Court of Wisconsin, the company contending, among other things, "that the going value determined by the commission and included in the amount fixed by it was based upon improper considerations and was inadequate in amount." The court agreed with the commission that the final sum was adequate compensation, but in the course of the opinion it used language which has tended to some extent to divert the commission into new and different paths in its views upon going value.

<sup>4</sup> 154 Wis. 121 (1913).

*Judicial Opinion of Going Value*

Meanwhile the subject of going value had become a matter of common discussion. The courts had already ruled that all methods of calculating value which were based upon earnings were inapplicable, certainly in rate cases, because earnings depend upon existing rate levels which are the very subject of investigation. They had ruled, for instance, that earnings could not be capitalized to determine value, that the market value of securities reflected earning power and was, therefore, improper evidence of value. Any method of measuring going value based upon earnings was thus under a cloud at the outset.

Moreover, there was a certain vagueness in defining going value that militated against its ready acceptance. Space does not permit giving in detail the nuances of meaning with which the term was used. In brief, we may say that it was distinguished from goodwill and franchise value. These had been quite generally disallowed. Yet there was a common-sense appeal in the contention that a property with an established and profitable business should be valued at a higher sum than its structural or legal elements. Hence we get such definitions of going value as "the difference between a dead plant and a live one," as "the value which flows from the established connections between the pipes and the buildings of the city," as compensation for "disturbance" in the ownership and possession of income-producing property (the British view), and others of like tenor. Most of them were not much better than clever figures of speech.

Equally varied and hypothetical were the methods employed in measuring or proving the amount of going value.

They varied all the way from crude applications of the capitalization of net-income concept to refined estimates of cost incurred in building up patronage. The method which has done most to bring the going-value concept into disrepute was designed by engineers to measure, on the analogy of the Wisconsin net deficit basis, the cost of reproducing the existing business by reference to a so-called comparative plant. Discriminating commissions were quick to point out the arbitrary character of the assumptions this method entailed.

*Effects of the Appleton Decision*

Now, in the Appleton case, after reviewing these methods, the court said:

It is quite apparent that the result reached by either of the suggested methods could hardly be considered as anything more than suggestive, and that its persuasiveness would necessarily depend upon many other facts which must enter into the general problem of value. The actual original cost of establishing the business of the existing plant is very clearly unsatisfactory to the last degree as a test of going value, because it may have been wasteful and extravagant, and because, also, it is well known that the building up of the business of a water plant 30 years ago before sewerage systems had become discredited was a much slower process than at the present time, when in such a city as Appleton the population has been educated to use the public supply of water.

However, the fundamental difficulty with the attempt to set a definite sum as the measure of going value is that it is an attempt to divide a thing which is in its nature practically indivisible. The value of the plant and business is an indivisible gross amount. It is not obtained by adding up a number of separate items, but by taking a comprehensive view of each and all of the elements of property, tangible and intangible, including property rights, and considering them all not as separate things, but as inseparable parts of one harmonious entity, and exercising the judgment as to the value of that final result, but it would

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be difficult for even an expert to say how many dollars of the result represent it.

The result of this decision was to drive the "going-value" concept underground. While the commissions still look into the past earning power, the evolution of "fair value" as a mental process has become a piece of mental prestidigitation which baffles analysis.

### *Extreme Views Contrasted*

As a matter of personal conviction, it should be made clear that I have no patience with a method which in unskilled or biased hands becomes an instrument for validating all past mistakes. Neither do I believe that the concept should be perverted to a competitive concept somewhat analogous to good-will, as it is in the comparative-plant method. Surely, the present situation is intolerable and unscientific when going value is left either to arbitrary, uncritical administrative fiat or to judgment methods which defy analysis.

Let me give illustrations. The Montana commission<sup>5</sup> made a typical award on a percentage basis: "There can be no question of our duty to make an allowance for going concern value. . . . While, so far as we know, no student of the problem has suggested a rational device for translating 'established business' value into dollars as units of value, we shall follow the rule more or less definitely discernible in the decisions, of adding 10% to the determined physical values. . . ." Another is from the Indiana commission:<sup>6</sup>

This commission has held that the major purpose of an allowance of going value is to cover out-of-pocket money expended by the

utility during the period of construction and development for invisible capital assets which are not susceptible of physical appraisal, as, for example, the cost of establishing the business.

The courts, however, have held that regardless of historical considerations a utility property has a going value in excess of the value of its physical property for the reason that the business is established and the property is a going concern.

If the actual expenditures for such unappraisable assets are disregarded, as the best measure of the amount of going value to be allowed, then the determination of the amount becomes purely a matter of speculation. (Re *Lafayette Telephone Company*, P. U. R. 1920A, 422.) That the fixing of the amount of going value is almost entirely speculative and arbitrary is concretely shown by the conclusions of one of the ablest minds in the field of regulation. In his argument on the principles and methods governing the value of railroad property, before the Interstate Commerce Commission on January 7, 1920, Judge C. A. Prouty, director of the valuation bureau of the Interstate Commerce Commission, said:

"How are you going to get at it? (going value). How are you going to determine how much to add? I have tried to demonstrate to the Commission that there was no way in which you could satisfactorily determine the amount of appreciation, and I think that is so. I do not know of any way in which it can be done. Going value might be even more difficult. How are you going to determine what shall be added? The fact that a thing is difficult does not excuse you from attempting to do it, and you also enjoy this advantage, that if you will just simply do it, without undertaking to say precisely how you did it, nobody can ever find any fault with it. That will absolutely end it."

So it is in the case now before the commission. There is no intelligent basis by which one may measure the amount of going value to be allowed. There are no peculiar or local facts or conditions which throw any light on the matter. In this situation the commission, in keeping with the decisions of the courts, will allow the sum of \$40,000 for going value.

<sup>5</sup> Re *Baker Natural Gas Utility*, P. U. R. 1921E., 623.

<sup>6</sup> Re *Laporte Gas and Electric Company*, P. U. R. 1921A., p. 865.

## II. Defining Going Value

At this point, a suggestion as to terminology seems pertinent. We are dealing here with a problem of value not in the commercial or competitive sense, but in the sense of value as a process by which the legislatures determine rates for a public utility. In applying appraisal concepts in such a process, it is necessary to have in mind a replica of the economic process by means of which these enterprises come into being. Therefore, it seems desirable to distinguish the following periods or phases in the life history of a going concern, and derive therefrom the following concepts: (1) The period of preliminary investigation, legal and financial organization, and so forth. This provides the future utility with what may be called the "going plan." (2) The period of actual construction with its incidental expenditures of engineering supervision, interest, and taxes during construction, and so forth. This provides the future utility with its "going plant." (3) The period during which the going plant acquires its market. We may call this the "going business."<sup>7</sup> The "going concern" would then be an enterprise which has evolved through all these stages. All necessary expenditures chargeable to capital may then be determined for the first and second stages. Expenditures during the third stage are operating expenses. By this method deficits incurred can only become a capital consideration as a result of legislative discretion. Even if the propriety of legislative discretion is granted in general, a problem remains in the constitutionality of a particular legislative policy or method.

<sup>7</sup> Cf. Commons, J. R., *Legal Foundations of Capitalism*, Macmillan, 1924, chap. v.

<sup>8</sup> 258 U. S. 388 (1922).

The question whether the Wisconsin formulation of going value and its quantitative measurement is in accordance with "due process of law" was squarely raised in *Galveston Electric Co. v. City of Galveston et al.*<sup>8</sup> In this case, rates, fixed by ordinance of a local council, were attacked by the company as confiscatory. Experts for the company had made two estimates of going value, one of \$575,300, another of \$2,000,000. The city's expert had calculated a going value of \$212,452. All of these calculations were based upon a capitalization of the net balance of past deficits. A special master, appointed to make advisory findings, had included the sum of \$520,000 for development cost. Justice Brandeis, who wrote the opinion, carefully distinguished this item from another of \$202,000 which was allowed to cover the so-called overhead costs of construction. The latter included also \$73,281 for "expenses of organization and business management." He said these expenses were "to cover the cost of establishing the system as a *physically going concern*."<sup>9</sup> The former item, he therefore concluded, must be an allowance to cover the cost of developing the railway "into a *financially successful concern*."<sup>10</sup>

The court then showed that these sums were the results of calculations going back in one case 39 years when the original horse-car line was built, in another case 15 years when the present owner purchased the property as a going concern. In both cases the calculations deduct from net income 4% as a depreciation annuity and an annual rate of 8% compound interest upon the value of the property. The net deficits

<sup>9</sup> Italics ours.

<sup>10</sup> Italics ours.

constituted a measure of the going value, and the question was whether an allowance based upon such evidence should be included in the rate case *in order to test whether the rate prescribed in the ordinance was confiscatory*.

### *Significance of the Galveston Case*

As we interpret the decision, the court ruled that going value, so conceived, is not a proper element to be included because, if going value were included, that would imply that rates would be confiscatory unless they yield continuously a full 8% return upon the prudent investment. The decision does not imply that it would be wise or equitable for a *legislative body* to leave such considerations out of account in fixing a rate-base for the purpose of fixing the rules in the first instance. The court merely ruled that it *need* not do so in order to render the rates *non-confiscatory*.

The issue, it seems, comes to this: Is going value a legislative or a judicial concept? According to the Wisconsin method, going value is a *legislative concept* within the range of legislative and, hence, of administrative discretion. If, on the other hand, it is a *judicial concept* (that is to say, an element in the judicial definition of public utility property), it would set the legislative rate-making power in motion to correct the earning-power situation. Our inference is that the court, in the Galveston case, ruled out going value as a judicial concept. Where the utilities are monopolies rendering a necessary service, such a view of "going value" in its relation to the rate-making function would take an element of risk out of the business and "would imply substantially a guaranty by the community that the investor will net on his investment ultimately a re-

turn of 8% yearly, with interest compounded on deferred payments; provided only that the traffic will, in the course of time, bear a rate high enough to produce that amount."

The implication of this ruling may be extended further. As the court says: "A company which has failed to secure from year to year sufficient earnings to keep the investment unimpaired and to pay a fair return, whether its failure was the result of imprudence in engaging in the enterprise, or of errors in management, or of omissions to exact proper prices for its output,"<sup>11</sup> cannot erect out of past deficits a legal basis for holding confiscatory for the future, rates which would, on the basis of present reproduction value, otherwise be compensatory." This statement reinforces what was said before. Any deficit, whether incurred initially or after the enterprise has acquired a profitable business, may not become the basis for the allowance of an intangible property right which the legislative power must recognize in fixing rates. On the other hand, judicial rules of valuation do not preclude the conclusion that the legislature *may* recognize such deficits in its future rate-adjustments. What else can the court have in mind when in the concluding paragraph it refers to good-will and earning power as due to effective organization and insists that "they, like past losses, should be considered in determining whether a rate charged by a public utility is *reasonable*." Note that the court says "reasonable," not "confiscatory." To make the point doubly sure the paragraph ends with this sentence: "Going-concern value and development cost, in the sense in which the master used these

<sup>11</sup> Judge Ransom makes a good point that such omissions may be due to legislative ineptitude in fixing rates in spite of protests from the utility.

terms, are not to be included in the base value for the purpose of determining whether a rate is *confiscatory*."

*Allowance for Going Value Is  
Legislative Policy*

If the above conclusion is correct, the recognition or non-recognition of "going value" in the Wisconsin sense becomes a matter of public policy. This in truth was the point of view of Commissioner Halford Erickson, who, as chairman of the Wisconsin Railroad Commission, left the impress of his thought upon the policies of that commission during the years when these policies were in the formative state. No one can read the excerpt from the Antigo opinion without appreciating that the aim was to build up a workable scheme of rate-control which would enable a commission to find a reasonable solution for past difficulties. Some one has well said that the definition of reasonableness is doing justice in hard cases. It is in this mood that the Wisconsin concept of going value finds a scientific application.

*Economic Justification of Going Value*

An economic principle is involved in these considerations which has never been brought to bear upon the question at issue. It is perhaps unnecessary to demonstrate that public utilities, taken as a class, are subject to the law of decreasing costs, resulting in a periodicity in the flow of net income. It would be rare, indeed, if such an enterprise could be self-supporting from the beginning. It would be equally rare if net income came as an even flow. The plant, as an original proposition or as a dynamic thing, has to be so designed as to provide a certain capacity. The exigencies of finding suitable locations,

of long-run economy in construction and operation, are such that public utilities must anticipate a future demand. On this account the following statement of Justice Brandeis is not the whole truth: "The fact that a sometime losing business becomes profitable eventually through growth of the community or more efficient management tends to prove merely that the adventure was not wholly misconceived." That may be true enough in those instances where public utility plants were constructed during boom periods and where the community failed to develop to boom expectations. Receiverships and reorganizations have usually liquidated such losses, and legislative policy cannot be required to look back of that return.

But how about a mistaken legislative policy which insists upon dividing the business among competing plants? It is, of course, a risk inherent in all economic enterprises that they must conform to the all-embracing economic equilibrium which adjusts supply price to the demand. Upon analysis, however, many situations will be found where public utilities were begun as a matter of public convenience and necessity but where a period of preliminary waiting—of readiness to serve, we may say—accompanied by solicitation for increased custom, was a natural concomitant of the economic development of producer-consumer relations. In such cases a legislative policy of rate-making would be economically unjust which would not permit an economic recoupment of early losses to investors through increased earning power at a time when full utilization had been attained. Such a procedure would, of course, require the exercise of judgment. It could not be reduced to a formula applicable in all cases. But this is no valid objection, because the

whole policy of regulation is based upon the exercise of official judgment in economic matters.

Has proper weight been given to another consideration of importance? In this country we are building up a policy of regulation which was an unknown quantity 20 years ago. Certainly 25 and 35 years ago public utility managers were given a freer hand in the development of the earning capacity of their properties. The scope and rules of public utility regulation are in a state of flux. The entire valuation problem bristles with difficulties in which *ex post facto* considerations are being applied in finding current solutions. Franchise rates are being abrogated or the terms completely revised, because we are finding that the fixed-rate type of regulation is hopelessly inadequate to the task. Do not these current changes suggest the need for a different attitude toward the controversial going-value concept?

If the rules of the game are thus to be revised by means of an all but omnipo-

otent police power, ought not a wise public policy to include giving discretion to round off the edges of these changes by means of a "going-value" concept that recognizes an equitable claim on account of past losses? Justice Brandeis' decision points the way by eliminating "going value" as a judicial concept which legislatures disregard at their peril. Instead he seems to construe "going value" as a legislative concept. In other words, allowances for going value are matters of general public policy which fall within the scope of legislative discretion. According to this view the definition and measurement of going value in each case are concerns of legislatures and commissions acting under legislative authority and not under the authority of judicial opinion. This will enable administrative commissions, in dealing with particular facts in special cases, to build a bridge from rate-control in an inchoate state to one in which the elements of regulation stand clearly revealed.



# THE TREND OF REAL ESTATE TAXATION IN KANSAS, 1910-1923

By ERIC ENGLUND

**R**ECENT public discussion of taxation and governmental expenditures has emphasized reduction in taxes more than revision of our fiscal system. It is perhaps insufficiently realized that true public economy means something more than mere reduction of expenditures, although to a people burdened by heavy post-war taxes a universal retrenchment naturally seems the most desirable possible accomplishment for the immediate future.

True public economy means not only judicious reduction in expenditures but also adjustment or revision of the existing system of taxation to meet new conditions in our economic life. But before adjustments can be made in the existing tax burdens, we must know what these burdens are. This is the great need at present in the discussion of real property taxes as compared with the taxation of other classes of property and of income. If we know first what the tax burden on real estate is, we shall be in a better position to suggest constructive readjustments of tax burdens generally. It will be helpful to know not only the tax burden on real property as a whole but also the burdens upon different classes of real estate, especially farm and city real estate, and to know the extent to which each political unit and each public activity has contributed to the increase in real estate taxes.

Scientific tax revision requires consideration of each tax by itself and in its relations to other taxes. Furthermore, it involves an analysis of the social and economic effects of particular forms of

taxation. If the existing systems of state and local taxation cause a disproportionate share of the public burden to fall on the real estate owner, such a situation will in all probability lead to socially undesirable consequences.

## I

With these thoughts in mind an investigation was made to determine the trend of taxes on farm and city real estate in Kansas from 1910 to 1923, and to measure the causes of the increase in the tax burden on each.<sup>1</sup> An attempt has been made to allocate to each class the correct share of the annual tax levy, and to show the trend of taxes relative to the selling value of real estate. An effort has also been made to determine to what extent the increase in real estate taxes was caused by higher levies for the state and for its subdivisions, and to what extent it was due to increased expenditures for each public purpose, such as general administration, education, roads and bridges, and so forth, irrespective of political subdivisions promoting these purposes.

### *Method of Study*

Full appreciation of the data presented and conclusions therefrom cannot be had unless the method of handling the statistical materials is made clear

<sup>1</sup> A more complete report will be published later as a bulletin of the Kansas Agricultural Experiment Station.

at the outset. A detailed explanation of the statistical method is superfluous for the present purpose. The following brief explanation is probably sufficient, if analyzed in connection with the tables.

The selling value of farm and city real estate was taken as the basis for showing the trend of taxes levied on these classes of property, because "true value in money" is the legal basis of assessment and taxation in Kansas, and because selling value appears to be the best available means of comparing the two classes of real estate, on a scale attempted in this study. Real estate values were calculated on the basis of *bona-fide* sales as reported to the tax commission<sup>2</sup> by the county assessors, who are instructed to report *bona-fide* sales only and to reject all transfers for "one dollar and other considera-

tions" and those showing inflated values such as might be involved in trading real estate.

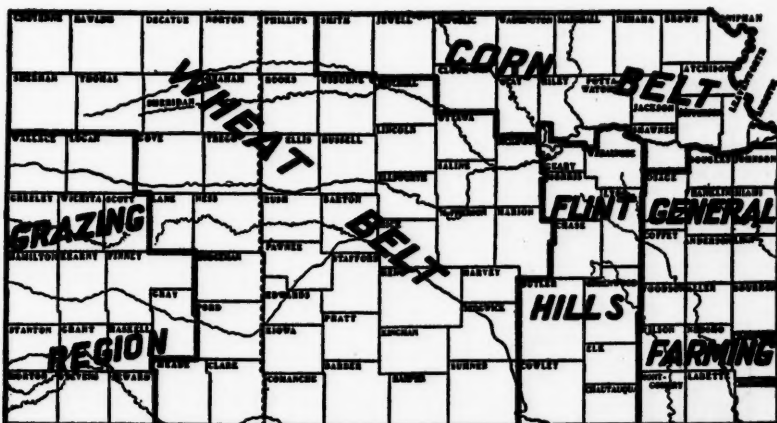
The selling value of farm real estate in this study is based on the *bona-fide* sale of 16,978,160 acres of land in 113,932 transfers over a period of 14 years, or an annual average of 1,212,726 acres and 8,138 transfers. The selling value of city real estate is based on a total of 101,612 sales in all parts of the state from 1910 to 1923, or an annual average of 7,258 sales.

Since the record of every real estate transfer includes both selling value and assessed valuation at the time of transfer, it was possible to determine the rate

<sup>2</sup>The Kansas State Tax Commission was abolished by the 1925 legislature, and all powers and duties of that body were transferred to the newly created Public Service Commission.

Chart I

**Map of Kansas Showing the Sections for Which Separate Tabulations Were Made in This Study\***



\* This is a general division of the state according to types of agriculture. The dotted line north and south through the wheat belt marks the eastern and the western halves of this section.

of assessment in each year under study.<sup>3</sup> Assuming that this rate was a sufficiently accurate indication of the rate of assessment, a theoretical selling value was found by dividing the total assessed valuation of each class of real estate by the rate of assessment. This was done for each of the six sections of the state, as shown in the map (Chart 1).

### Calculation of Selling Value

For the purpose of this study the average selling value per acre was calculated by dividing the above theoretical selling value of all land and improvements by the number of acres taxable. The general accuracy of this method is indicated by comparing the resulting calculated selling value per acre of land in 1910 and in 1920 with the Census valuation of land and buildings (Table I). It will be noted that the principal difference between the calculated selling value and the census valuation occurs in the western half of the wheat belt and in the southwest grazing region. This difference is probably due to the fact that the number of acres taxable in these sections of the state exceeded the number of acres in farms by 44.4% in 1910 and by 28.1% in 1920. If the value of taxable land not included in farms is below the average value of all land, as is highly

<sup>3</sup> Assessed valuation of each class of real estate in percentage of selling value, based on *bona-fide* sales from 1910 to 1923:

Year	Farm Real Estate	City Real Estate	Year	Farm Real Estate	City Real Estate
1910.....	72.4*	77.6	1917.....	64.6	73.4
1911.....	70.3	75.9	1918.....	68.8	72.3
1912.....	68.8	73.9	1919.....	57.3	67.1
1913.....	67.6	77.2	1920.....	59.5	62.1
1914.....	69.1	75.5	1921.....	62.3	61.3
1915.....	67.9	78.7	1922.....	64.1	66.6
1916.....	68.9	76.9	1923.....	67.7	62.4

\*Two decimal places were carried in all calculations.

TABLE I. CALCULATED SELLING VALUE COMPARED WITH CENSUS VALUATION OF LAND AND IMPROVEMENTS PER ACRE—1910 AND 1920

Section of Kansas	1910		1920	
	Calculated Selling Value	Census Valuation	Calculated Selling Value	Census Valuation
State average....	\$36.79	\$40.05	\$ 60.46	\$ 62.30
Corn belt.....	63.41	63.03	103.64	102.09
General farming	46.86	45.57	81.24	76.05
Flint Hills.....	35.33	35.51	63.65	61.79
Eastern half of wheat belt....	44.36	45.33	71.44	70.73
Western half of wheat belt....	17.60	19.71	29.07	31.06
Southwest grazing region....	9.32	13.06	18.13	20.30

probable, the average value per acre of all land would be less than the average value per acre in farms. The average deviations of the calculated value from the Census valuation in the six sections of the state are: \$1.44 in 1910 and \$2.08 in 1920; or 3.9% and 3.4% respectively, of the arithmetic average of the Census valuations in the six sections. Therefore, it is reasonable to assume that the above method of determining the selling value of land is sufficiently accurate for a substantially correct presentation of trends.

Taxes levied on each class of real estate were calculated on the basis of the assessed valuation of each class and on total levies for the state and for its subdivisions. Special assessments or improvement taxes were not included. County taxes levied on each class of real estate were determined: (1) by dividing the total county levy with the valuation of all taxable property in the county to find the county rate; and (2) by multiplying the assessed valuation of each class of property by this rate. Tax levies for political subdivisions smaller than the county were allocated by sections of the state. No claim is made to absolute accuracy in the allocation of tax levies, but the

TABLE II. TAXES LEVIED ON ALL FARM REAL ESTATE IN KANSAS AND IN EACH SECTION OF THE STATE—1910-1923\*  
(In thousands of dollars)

Year of Levy	State Total	Corn Belt	General Farming	Flint Hills	Eastern Half of Wheat Belt	Western Half of Wheat Belt	Grazing Region
1910...	\$ 9,706	\$2,446	\$1,858	\$1,018	\$3,129	\$ 831	\$ 423
1911...	10,704	2,659	1,891	1,175	3,535	951	492
1912...	10,914	2,795	1,941	1,209	3,589	941	439
1913...	11,261	2,968	2,079	1,254	3,588	914	458
1914...	11,882	3,133	2,115	1,330	3,865	984	455
1915...	12,705	3,333	2,290	1,411	4,156	1,003	510
1916...	14,428	3,703	2,423	1,572	4,838	1,290	602
1917...	14,643	3,827	2,527	1,533	4,855	1,263	636
1918...	16,027	4,686	2,605	1,572	4,983	1,442	738
1919...	19,604	4,996	3,301	2,023	6,455	1,921	907
1920...	23,453	6,072	3,870	2,396	7,819	2,198	1,100
1921...	27,267	7,042	4,869	2,752	8,758	2,490	1,357
1922...	24,259	6,105	4,358	2,437	7,580	2,435	1,344
1923...	25,995	6,494	4,616	2,671	8,015	2,762	1,438

\*Includes all general property levies for state, county, township, school, and drainage purposes. It does not include special assessment or improvement taxes, which amounted to \$383,451 on all property outside of cities in 1923.

results are believed to be sufficiently accurate for determining the trends.

## II. The Trend of Taxes on Farm Real Estate

*Increase in total taxes on farm real estate.* Taxes levied on all farm real estate in Kansas increased from \$9,706,000 in 1910 to \$25,995,000 in 1923, an increase of 168%. In the meantime total selling value increased from \$1,842,000,000 to \$2,566,000,000, an increase of 39%. Taxes per acre (Table III) were determined by dividing the total tax levies (Table II) by the number of acres of taxable land. The selling value of land per acre (Table IV) was found according to the method outlined above.

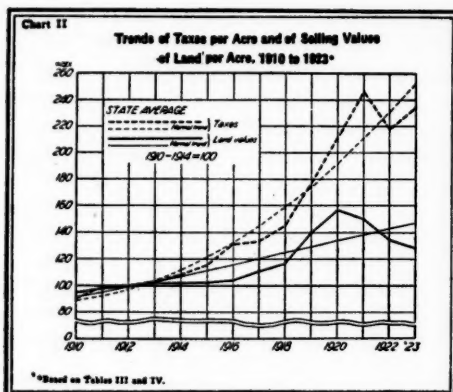
*Taxes relative to selling value of real estate.* The relationship between taxes per acre and selling values per acre of all taxable land in Kansas is shown in Chart II. This relationship is established by comparing the data in

Tables III and IV. By plotting the respective trends of taxes and selling values in this manner, the increasingly heavy tax burdens in farm land are indicated in some measure (Chart II).

A better indicator, however, is the ratio of taxes to selling value, combining in a single curve what is shown by two curves in the preceding chart. This ratio was found by dividing the total tax levies, shown in Table II, by the calculated selling value of all farm real estate in Kansas, and in each section of the state (Chart III).

*Reasons for the increase in taxes on farm real estate.* Taxes on farm real estate in Kansas increased from 1910 to 1923 chiefly because of greater expenditures of local government, and only to a small degree because of higher state levies (Chart IV).

The extent to which greater expenditures of the state government, and of the political subdivisions, are responsible for the increase in the ratio of taxes to selling value is shown in Table



V, which gives taxes per \$1,000 selling value of farm real estate. The responsibility for this increase is shown more specifically in Table VI, which compares average levies in 1910-1914 with averages for 1919-1923.

State and local taxes, shown in Table V and in Chart IV, were expended for a number of purposes. For example, the county levy in 1923 included ten sublevies for various purposes, in addition to the item designated as "general revenue." The township levy was

divided into seven parts; and the state levy into six parts, according to groups of purposes for which legislative appropriations were made. It is therefore necessary to subdivide each levy, state and local, before the total of all levies can be divided into public purposes (such as schools, roads, or general administration) for which the revenue was used.<sup>4</sup> Public reports on taxation in Kansas prior to 1916 do not contain data in sufficient detail to admit of a division of each levy according to purposes for which expended. Consequently, this division of real estate taxes covers only the period from 1916 to 1923, inclusive. Chart V shows taxes levied on farm real estate for various public purposes during this period. The extent to which each public purpose was responsible for the increase in the ratio of taxes to selling value of farm real estate is shown in Table VII, which compares average levies in 1916-1918

<sup>4</sup>The method used in dividing each levy according to purposes served will be explained in detail in the complete report of this study.

TABLE III. TAXES PER ACRE OF ALL TAXABLE LAND OUTSIDE OF CITIES IN KANSAS, BY SECTIONS—1910-1923  
(Cents)

Year	State Average	Corn Belt	General Farming	Flint Hills	Eastern Half of Wheat Belt	Western Half of Wheat Belt	Grazing Region
1910.....	19.4	34.1	29.9	18.9	20.5	8.7	6.5
1911.....	21.3	37.9	30.5	21.8	23.2	9.9	7.2
1912.....	21.5	38.7	31.2	22.4	23.4	9.7	6.4
1913.....	22.1	41.1	33.4	23.2	23.4	9.4	6.4
1914.....	23.2	43.3	34.0	24.6	25.2	10.1	6.3
1915.....	24.8	46.1	36.8	26.1	27.1	10.3	7.0
1916.....	28.1	51.1	39.0	29.1	31.7	13.2	8.2
1917.....	28.5	52.8	40.6	28.4	31.6	12.9	8.6
1918.....	31.1	64.7	41.9	29.1	32.5	14.7	9.9
1919.....	38.1	68.9	53.0	37.4	42.3	19.6	12.1
1920.....	45.4	83.6	62.2	44.4	50.9	22.4	14.5
1921.....	52.8	97.0	78.2	50.9	57.4	25.4	17.7
1922.....	46.9	84.0	70.1	44.8	49.4	24.8	17.5
1923.....	50.3	89.0	74.8	49.4	52.2	28.1	18.7



TABLE IV. SELLING VALUE OF LAND IN KANSAS PER ACRE, BY SECTIONS OF THE STATE—1910-1923

Year	State Average	Corn Belt	General Farming	Flint Hills	Eastern Half of Wheat Belt	Western Half of Wheat Belt	Grazing Region
1910.....	\$36.79	\$ 63.41	\$46.86	\$35.33	\$44.36	\$17.60	\$ 9.32
1911.....	38.31	66.39	48.28	37.59	46.66	17.88	9.77
1912.....	38.94	68.88	51.94	37.31	47.32	16.99	9.31
1913.....	39.51	71.11	50.24	39.04	49.07	16.25	9.60
1914.....	39.54	71.97	51.25	43.27	47.47	15.81	9.49
1915.....	39.55	71.10	52.65	37.45	49.19	15.92	10.03
1916.....	40.09	70.98	52.16	39.44	48.97	17.78	10.97
1917.....	43.00	75.24	55.14	43.05	52.02	20.08	12.66
1918.....	45.25	79.68	56.65	47.18	55.46	20.37	12.49
1919.....	54.19	87.44	69.64	55.17	69.73	25.20	14.70
1920.....	60.46	103.64	81.24	63.65	71.44	29.07	18.13
1921.....	57.83	99.45	78.49	62.70	67.35	28.14	16.88
1922.....	52.07	89.72	69.08	53.30	61.51	25.41	16.96
1923.....	49.62	84.62	65.60	51.16	58.37	25.79	15.49

with similar averages for 1921-1923. The relatively large increases for education and highways are noticeable.

### III. The Trend of Taxes on City Real Estate

*Increase in total taxes on city real estate.* Total taxes on city real estate in Kansas increased from \$5,842,000 in 1910 to \$21,068,000 in 1923, an increase of 261%. The calculated selling value increased from \$547,000,000 to \$919,000,000, or 68%, in the same period. Table VIII shows the annual tax levy on city real estate for the state as a whole and for each section, in the period under study.

*Taxes relative to selling value of city real estate.* The ratio of taxes to selling value of city real estate was found by dividing the tax levies shown in Table VIII by the calculated selling value of all city real estate. The resulting ratio is shown in Chart VI. It will be noted that the state average in Chart VI is not as uniform as in the case of farm real estate (Chart III), and that the ra-

tios in city real estate for the six sections deviate more from the state average. These differences are the result of causes that are too complicated to discuss in adequate detail here.

*Reasons for the increase in taxes on city real estate.* Increased expenditures for municipal governments and for city schools were the principal reasons for the rise in taxes on city real estate, as shown in Chart VII.

The extent to which increased levies for the state and for its political subdivisions were responsible for the increase in the ratio of taxes to selling value of city real estate is shown in Table IX, which gives taxes per \$1,000 selling value. The portion which each levy contributed to the total increase is shown more specifically in Table X, which compares average levies in 1910-1914 with similar averages for 1919-1923.

Tax levies on city real estate were expended for several distinct public purposes. Hence, these levies were divided, as in the case of farm real estate, into six groups according to purposes for

which expended: administration; education; roads and bridges, streets and alleys; interest; sinking fund; and miscellaneous.<sup>5</sup> Total levies for these purposes, from 1916 to 1923, are shown in Chart VIII. The increase in taxes for each purpose from 1916-1918 to 1921-1923 per \$1,000 selling value of city real estate is shown in Table XI. Again educational expense is the biggest item.

#### IV. Farm and City Real Estate Compared

The ratio of taxes to selling value of city real estate was more than twice as high as in the case of farm real estate, from 1910 to 1923. Moreover, the rate of increase in this ratio was greater in the case of city real estate than in the case of farm real estate, as shown in Chart IX.

<sup>5</sup> "Miscellaneous" includes levies for penal, charitable, and patriotic institutions, in addition to the items designated as miscellaneous in the public records. (See footnote 4.)

*Comparison of levies on farm and city real estate.* The extent to which the increase in taxes, relative to the selling value of farm and city real estate, was caused by greater levies for the state and for its political subdivisions is shown in Chart X, on page 457. Higher levies for the state government and for the counties caused approximately the same increase per \$1,000 of selling value of both classes of real estate.<sup>6</sup> The greater advance in taxes on city real estate was due to increased expenditures within the cities.

The extent to which increased expenditures for specific public purposes are responsible for the increase in the ratio of taxes to selling value of each class of real estate is shown in Chart XI.

#### Mitigating factors in high tax rate

<sup>6</sup> Since the state levy, and the county tax rate within each county, are the same on all taxable property, only a pronounced difference in the rate of increase in the selling value of the two classes of real estate could cause a marked difference in the increase of state and county levies per \$1,000 of selling value.

Chart III

**Taxes in Percentage of the Selling Value of All Farm Real Estate in Kansas, and in Each Section of the State, 1910 to 1923**

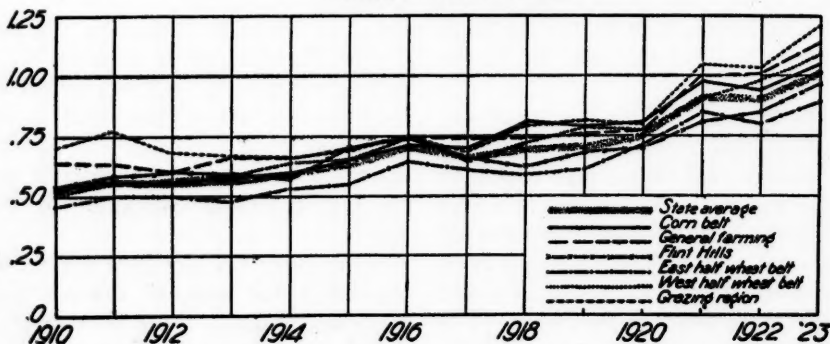


TABLE V. TAXES PER \$1,000 SELLING VALUE OF FARM REAL ESTATE IN KANSAS, FOR THE STATE AND THE SUBDIVISIONS—1910-1923

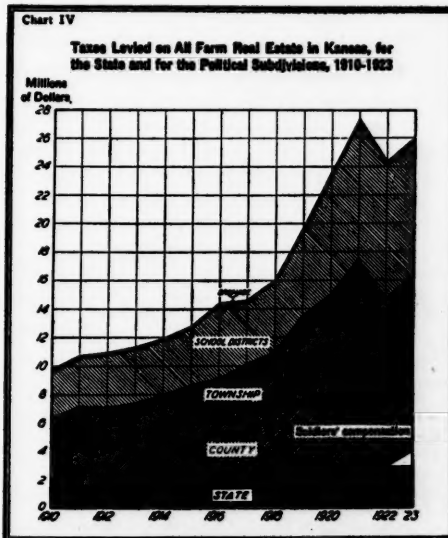
Year of Levy	Total	State Government	County	Township	Rural High Schools	School Districts	Drainage
1910.....	\$5.27	\$0.77	\$1.49	\$1.15	....	\$1.83	\$0.03
1911.....	5.55	.84	1.62	1.21	....	1.85	.03
1912.....	5.52	.82	1.62	1.16	....	1.88	.04
1913.....	5.58	.81	1.66	1.18	....	1.88	.05
1914.....	5.87	.83	1.83	1.22	....	1.93	.06
1915.....	6.27	.86	1.99	1.40	....	1.93	.07
1916.....	7.01	.91	2.05	1.41	\$0.05	2.54	.05
1917.....	6.63	.94	2.30	1.33	.13	1.85	.06
1918.....	6.86	.80	2.31	1.58	.18	1.95	.06
1919.....	7.03	1.01	2.54	1.29	.23	1.92	.05
1920.....	7.52	.84	2.60	1.33	.45	2.25	.06
1921.....	9.14	1.40	2.96	1.52	.61	2.61	.06
1922.....	9.01	1.07	2.91	1.48	.66	2.83	.06
1923.....	10.13	1.58*	3.11	1.63	.80	2.94	.07

\*Includes \$.56 for soldiers' compensation fund.

on city real estate. A hasty comparison of the ratios of taxes to selling value of the two classes of real estate (Chart IX) might lead to the conclusion that city real estate is at a serious disadvantage compared to farm real estate, and that the owner of city property would, therefore, have just grounds for complaint. But these apparently unfair differences between farm and city real estate are minimized by the following factors: (1) greater shiftability of the tax on city real estate; (2) services rendered by municipal governments, and the probable effect of these services on rents and real estate values; and (3) the probability that the city real estate owner has greater taxable capacity than the farmer, in addition to that which is represented by the ownership of real estate. Each of these factors will be considered separately.

1. Taxes can be shifted only through the medium of price in the exchange of goods or services between the person from whom the tax is collected and other persons. Hence, taxes levied on farm real estate could not possibly

be shifted to the consumers of farm products, except through an increase in the price of the products. Such an advance in the price of farm products could not take place except as a result of sufficient diminution in the quantity of those products to cause an increase in their market



price. But the prices of farm products are determined mainly by forces that are national and even world-wide in their influence. It has been demonstrated abundantly in the past few years that an increased tax burden on farm real estate has not resulted in an advance in farm prices. These prices have gone up or down according to domestic and world conditions of competition and demand for farm products, and not according to the trend of state and local taxes.

Rising real estate taxes may have a tendency to increase higher than to diminish the quantity of farm products offered in the market, because of the probable effect of these taxes on land utilization. An increase in the land tax has been heralded as a blessing by certain types of "economic reformers," because it would force "idle" land into use. As a program of economic reform, this doctrine has probably lost an important portion of what little following it may have had among farmers, because of a relative overproduction and the resulting low farm prices since 1920. If higher taxes would force "unused" land into use, it should be equally true that such taxes would spur owners of land already in use to put it to a

TABLE VI. INCREASE IN TAXES PER \$1,000 SELLING VALUE OF FARM REAL ESTATE IN KANSAS, FOR THE STATE AND THE POLITICAL SUBDIVISIONS, FROM 1910-1914 TO 1919-1923\*

State and Subdivisions	Average Levy 1910-14	Average Levy 1919-23	Increase	Percentage of Increase
Total.....	\$5.56	\$8.52	\$2.96	100.0
State government.....	.82	1.17†	.35	11.8
Counties.....	1.64	2.81	1.17	39.6
Townships.....	1.18	1.44	.26	8.8
School districts.....	1.88	3.04	1.16	39.3
Drainage.....	.04	.06	.02	.5

\*Calculated selling value of farm real estate, annual average: 1910-1914, \$1,958,000,000; 1919-1923, \$2,830,000,000.

†Includes levy of \$1,172,000 for soldiers' compensation fund in 1923.

TABLE VII. INCREASE IN TAXES LEVIED PER \$1,000 SELLING VALUE OF FARM REAL ESTATE IN KANSAS FOR SPECIFIED PURPOSES, FROM 1916-1918 TO 1921-1923\*

Public Purpose	Average Levy 1916-18	Average Levy 1921-23	Increase	Percentage of Increase
Total.....	\$6.84	\$9.42	\$2.58	100
Administration (general revenue).....	1.54	1.38	-.16†	-6.2
Education.....	2.83	4.48	1.65	63.9
Roads and bridges.....	1.70	2.25	.55	21.3
Interest.....	.14	.17	.03	1.2
Sinking fund.....	.20	.21	.01	.4
Drainage.....	.06	.06	0	0
Miscellaneous.....	.37	.87‡	.50	19.4

\*Average calculated selling value of farm real estate: 1916-1918, \$2,198,000,000; 1921-1923, \$2,747,000,000.

†Decrease due to a more rapid increase in real estate values than in tax levies for general revenue.

‡Includes \$1,172,000 for soldiers' compensation fund in 1923.

higher use, if to do so would hold any promise of greater income. For example, pasture land might be broken up and seeded with wheat, and thus increase the quantity of wheat offered in the market. Be this as it may, the primary fact is that prices of farm products are established by competitive conditions that are national and often world-wide in scope, while land taxes are far from uniform throughout the national or world-wide areas over which price-determining forces exercise their influence. Therefore, taxes on farm real estate cannot be shifted by the landowner to other persons, because these taxes are powerless to increase the market price of farm products.<sup>7</sup>

<sup>7</sup> See Professor Edwin R. A. Seligman, *The Shifting and the Incidence of Taxation* (fourth edition), Part II, chap. ii. and p. 271. "Our conclusion, hence, is that under actual conditions in America today the landowner may virtually be declared to pay, in the last instance, the taxes that are imposed on his land. At all events, it is erroneous to assume any general shifting to the consumer. To the extent that our land tax is a part of a general property tax, it cannot possibly be shifted; to the extent that it is more or less an exclusive tax, it is even then apt to remain where it is first imposed—namely, on the landowner."

TABLE VIII. TAXES LEVIED ON ALL CITY REAL ESTATE IN KANSAS AND IN EACH SECTION OF THE STATE—1910-1923\*  
(In thousands of dollars)

Year of Levy	State Total	Corn Belt	General Farming	Flint Hills	Eastern Half of Wheat Belt	Western Half of Wheat Belt	Grazing Region
1910.....	\$ 5,842	\$2,246	\$1,190	\$ 437	\$1,786	\$112	\$ 71
1911.....	6,902	2,565	1,603	509	2,023	125	76
1912.....	6,952	2,481	1,635	543	2,087	126	80
1913.....	7,369	2,678	1,735	484	2,284	114	73
1914.....	7,903	2,826	1,794	587	2,427	177	91
1915.....	8,501	3,165	1,891	670	2,478	197	101
1916.....	8,214	3,182	1,871	570	2,312	175	103
1917.....	10,496	3,770	2,359	862	3,093	256	157
1918.....	10,731	3,372	2,619	1,024	3,251	295	171
1919.....	13,323	4,447	3,118	1,299	3,913	333	213
1920.....	15,618	5,008	3,561	1,536	4,873	370	270
1921.....	18,072	5,864	4,170	1,642	5,626	449	322
1922.....	18,622	5,675	4,175	1,762	6,084	537	389
1923.....	21,068	6,727	4,536	1,911	6,816	633	444

\*Includes all general property levies for state, county, city, and school purposes, but does not include special assessment or improvement taxes. The total of these special levies on all property in cities in 1923 was \$4,809,586.

The tax on city real estate presents a different and perhaps a more complex problem. The value of city lots, like that of farm land, is determined by net income. More specifically, the value of land tends to equal the *present value* of all anticipated incomes. Other things being equal, net income from farm land depends upon the price of farm products, which, as mentioned above, is in turn dependent upon national and world conditions of competition and demand. The income from city lots depends largely upon location, which is generally determined by factors that are more local in character than the forces influencing farm prices. Factors influencing the location value of lots, and, hence, their rental value, are unaffected by taxation.<sup>8</sup> Therefore,

<sup>8</sup> Exception might well be taken to this statement when considering the desirability of city lots as a whole. Revenue used to provide improvements and services in a municipality might have an effect on the value of lots, because of the effect of such improvements and services on the desirability of living conditions in the municipality.

the tax on the lot itself must necessarily be borne by the owner.

A different problem is presented by the tax on city improvements, which constitute about 64% of the combined valuation of lots and improvements in

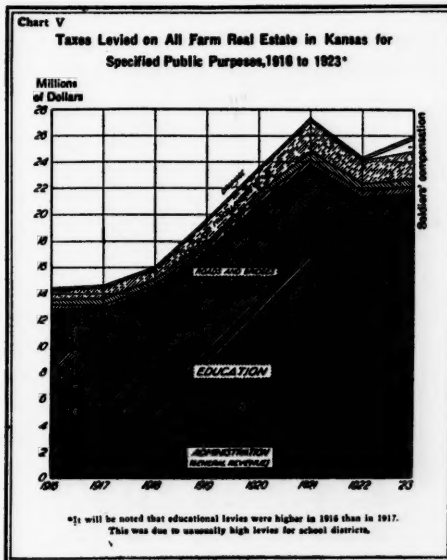




TABLE IX. TAXES PER \$1,000 SELLING VALUE OF CITY REAL ESTATE IN KANSAS, FOR THE STATE AND THE POLITICAL SUBDIVISIONS—1910-1923

Year of Levy	Total	State Government	County	City, Except Schools	City Schools
1910.....	\$10.67	\$0.82	\$1.66	\$4.39	\$ 3.81
1911.....	11.93	.91	1.84	5.15	4.03
1912.....	11.66	.89	1.86	4.74	4.17
1913.....	12.76	.93	2.01	5.21	4.61
1914.....	13.43	.91	2.09	5.43	5.00
1915.....	14.78	.99	2.39	6.00	5.40
1916.....	12.97	.99	2.29	5.71	3.98
1917.....	15.47	1.05	2.66	5.53	6.23
1918.....	14.88	.84	2.57	4.74	6.73
1919.....	17.91	1.18	3.00	6.36	7.37
1920.....	19.51	.88	2.68	6.67	9.28
1921.....	21.10	1.38	3.16	6.98	9.58
1922.....	22.34	1.11	3.16	7.62	10.45
1923.....	22.94	1.45*	3.09	7.65	10.75

\*Includes taxes levied for the soldiers' compensation fund. Of the \$1.45 of state levy on each \$1,000 of selling value of city real estate, \$0.42 is for the compensation fund and \$1.03 for the state government and state institutions.

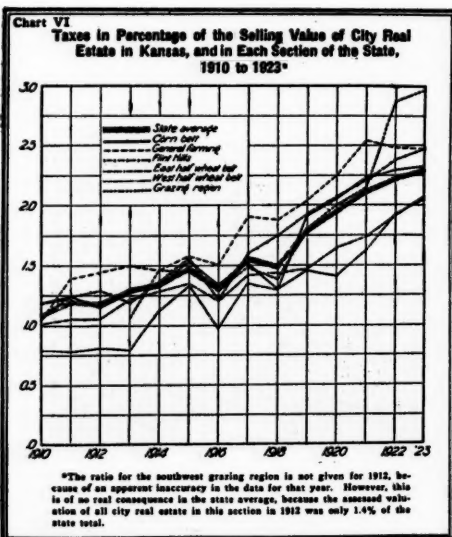
Kansas. Taxes are levied on both alike. But the assessed valuation of improvements in case of farm real estate is less than 8% of the combined valuation of land and improvements. This, together with the extent and complexity of forces that determine farm prices, precludes any practical possibility of a

shifting of the tax on farm improvements to the consumers of farm products.

Improvements are a capital investment. An increasing tax rate on city real estate tends to make investment in city improvements less attractive. This will be reflected in a scarcity of housing accommodations in growing communities, which will in turn cause rents to rise to a point where capital will be attracted into improvements, notwithstanding the high tax. Thus the taxes on city improvements are in a considerable measure shifted by the owner to other persons through the medium of higher rents.<sup>9</sup>

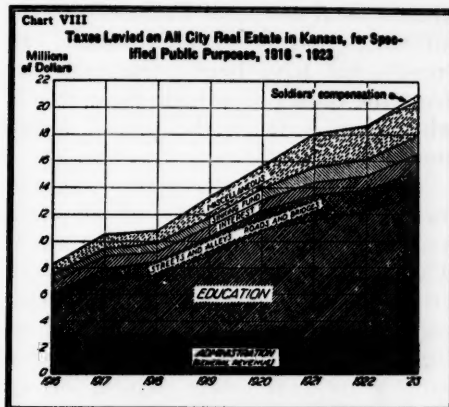
## 2. When comparing the tax burdens

<sup>9</sup>Exception to this general principle is found in declining urban communities where improvements exceed the demands of a diminishing population. In such a community, the deteriorating improvements may be occupied at a low rental notwithstanding the tax, since such improvements are a form of specialized capital and, therefore, cannot easily be removed and put to other uses. Under such conditions, the owner's bargaining power is low; he must "take what he can get" and bear the tax.



of the farmer and of the city dweller, it is necessary to take into account the fact that city governments provide many improvements and services which are not ordinarily enjoyed in rural communities. Municipal governments are, in a large measure, cooperative institutions through which city people provide themselves with a number of advantages which are seldom enjoyed in rural districts. It is impossible to say to what extent city realty values are influenced by the advantages which city people provide for themselves through their municipal governments. It seems probable that improvements and services which add to the safety, convenience, and attractiveness of a community serve to increase the value of urban property.

3. Another mitigating factor that should be taken into account, when considering the relatively high ratio of taxes to selling value of city real estate, is that owners of city real estate probably have a greater taxable capacity than the farmer, in addition to that which is represented by real estate ownership. The greater share of personal property in cities consists of in-

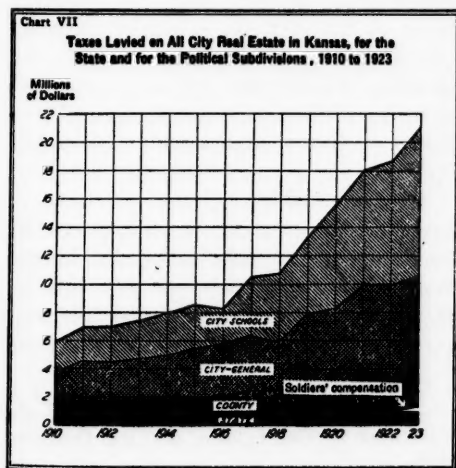


tangible personality which usually escapes taxation. Furthermore, city dwellers frequently enjoy a substantial income from sources other than real estate, in the form of salaries, wages, or returns for professional services such as those rendered in medicine and law. These types of income escaped direct state and local taxes in a state like Kansas, where general property taxation was almost the only means of raising revenue in the period under study; and tangible property, of which real estate is the principal item, had to bear the burden.

Real estate and tangible personal property are the principal forms of investment in rural communities and thus are the chief basis for the farmer's income. Therefore, the property tax levy, under the present system, necessarily must be a large direct deduction from the income of the rural population. In cities, on the other hand, the real estate tax may or may not be an important direct demand upon the taxable capacity of the individual owner.

#### V. Real Estate Taxation in the Future

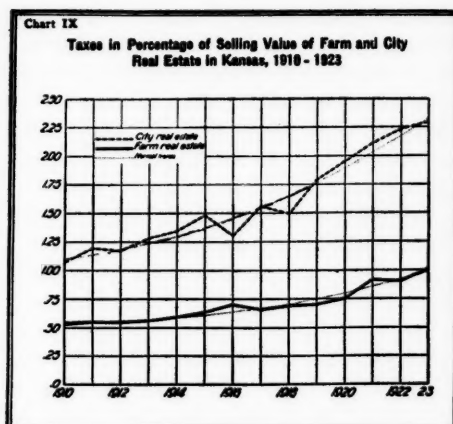
Although it is not the purpose of this paper to advocate changes in the



present fiscal system of Kansas,<sup>10</sup> certain inferences may be drawn from the tax trends that have been presented, and from the causes that made these trends what they were in the period under study.

The general property tax was the means of raising 86.8% of all state and local revenues in Kansas in 1922. This extensive reliance on general property taxation, together with the increasing expenditures of the state and of local government, caused taxes to rise rapidly on real estate, which, of all classes of property, is least able to escape taxation. Consequently, the ratio of taxes to selling value of farm real estate almost doubled from 1910 to 1923, and that of city real estate more than doubled in the same period.

This study shows that expenditures for the general or administrative functions of state and local government in Kansas became a decreasing burden on the selling value of farm and city real estate and that the increase in real estate taxes was due principally to greater expenditures for roads and bridges, education, and other improvements and services. It is, therefore, inaccurate to say that the increase in the "cost of government" caused the ratio of taxes



to selling value of real estate to advance approximately 100% from 1910 to 1923. It would be more accurate to say that taxes rose because of increased expenditures for the improvements and the services which public opinion demanded of government for the common welfare.

The expansion in the service functions of government in the period under study necessarily resulted in the socialization of an increasing share of the income of the people. However, since popular demand for more improvements and services was the primary cause of the increase in public disbursements, it must be admitted that the increase in taxes was not only inevitable but also proper, unless one should presume to judge the wisdom of public opinion.

When considering the increase in taxes on real estate, it should not be forgotten that taxes are paid, in the last analysis, by persons and not by things. An increase in taxes on real estate means an increase in taxes on

TABLE X. INCREASE IN TAXES PER \$1,000 SELLING VALUE OF CITY REAL ESTATE IN KANSAS FOR THE STATE AND THE SUBDIVISIONS, FROM 1910-1914 TO 1919-1923\*

State and Subdivisions	Average Levy 1910-14	Average Levy 1919-23	Increase	Percentage of Increase
Total.....	\$12.11	\$20.87	\$8.76	100.0
State government.....	.89	1.21†	.32	3.6
Counties.....	1.89	3.02	1.13	12.9
Cities, general.....	4.99	7.08	2.09	23.8
City schools.....	4.33	9.56	5.23	59.7

\*Calculated selling value of city real estate: average, 1910-1914, \$578,000,000; average, 1919-1923, \$831,000,000.

†Includes levy of \$386,000 for soldiers' compensation fund in 1923.

<sup>10</sup> A tax program for this state is presented in *Tax Revision in Kansas*, Kansas Agricultural Experiment Station Bulletin, No. 234, December, 1924.

the real estate owner, unless he is able to shift the tax to other persons, which is a negligible possibility in the case of farm real estate. But the problem of whether the increase in the tax burden on the landowner has been excessive in recent years, compared to the increase in the burden on the taxable capacity of other persons, is outside the scope of this particular study, though this subject is admittedly important in a general tax revision.

If the ratio of taxes to selling value of farm real estate in Kansas should continue to rise as rapidly as in the past 14 years, in a relatively few years the tax burden would equal the annual land income.<sup>11</sup> If the normal trends, shown in Chart IX, should continue 14 years beyond the period under study, that is, till 1937, the ratio of taxes to selling

<sup>11</sup>This statement is less applicable to city real estate because of a greater shiftability of the city real estate tax.

TABLE XI. INCREASE IN TAXES PER \$1,000 SELLING VALUE OF CITY REAL ESTATE IN KANSAS FOR SPECIFIED PURPOSES, FROM 1916-1918 TO 1921-1923\*

Public Purpose	Average Levy: 1916-18	Average Levy 1921-23	Increase	Percentage of Increase
Total.....	\$14.48	\$22.14	\$7.66	100
Administration (general revenue).....	3.23	3.04	-.19†	-2.6
Education.....	6.37	11.25	4.88	63.7
Roads and bridges, streets and alleys.....	1.40	2.01	.61	8.0
Interest.....	1.08	1.27	.19	2.5
Sinking fund.....	1.05	1.43	.38	5.0
Miscellaneous ..	1.35	3.14‡	1.79	23.4

\*Calculated selling value of city real estate: average, 1916-1918, \$678,000,000; average, 1921-1923, \$870,000,000.

†Decrease due to a more rapid increase in city real estate values than in tax levies for general revenue.

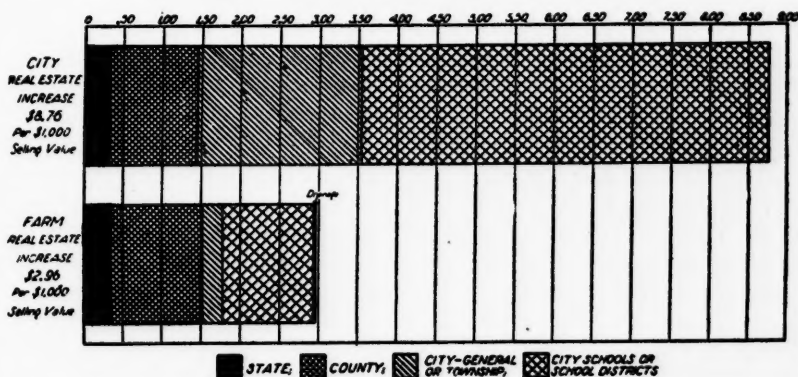
‡Includes \$386,000 for soldiers' compensation fund in 1923.

value of farm and city real estate would be 2.48% and 5.53%, respectively.

But a continuation of the rate of increase which prevailed from 1910 to 1923 seems highly improbable. It is possible that this period was marked by

Chart X

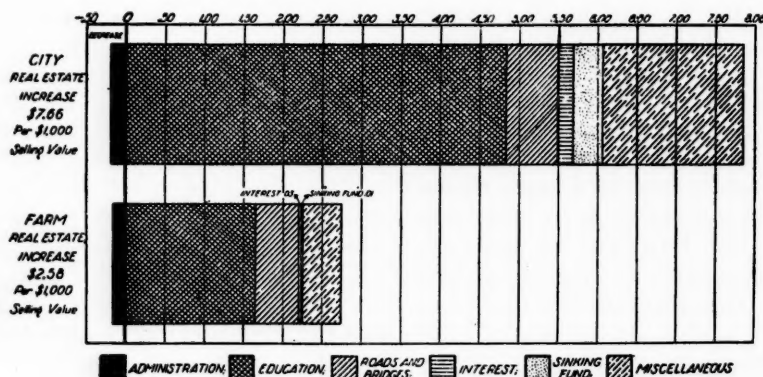
Increase in Taxes for the State and Its Political Subdivisions per \$1,000 Selling Value of Farm and City Real Estate in Kansas—1910-1914 to 1919-1923\*



\*Based on Tables VI and X.

Chart XI

**Increase in Taxes for Specified Purposes, per \$1,000  
Selling Value of Farm and City Real Estate in Kansas,  
1916-1918 to 1921-1923\***



\*Based on Tables VII and XI.

an abnormal increase in the service functions of state and local government, principally of the latter. Be this as it may, three possibilities present themselves: (1) the pressure of taxes may arouse sufficient public opposition to additional expansion in the service functions of government to cause a substantial reduction in the rate of increase in state and local expenditures; (2) new means of raising revenue may be found to supplement general property taxation, in an effort to diffuse more widely the cost of public improvements and services; (3) wealth may increase fast enough to maintain the present scale of governmental expenditure.

In view of recent progress in tax

legislation in Kansas,<sup>12</sup> relief from high real estate taxes may be sought in supplementary sources of revenue as well as in retrenchment in governmental expenditures. Only conjecture is possible, not positive prediction, as to the future fiscal policies of this state. It is extremely difficult, for example, to forecast the rate of increase in the production of wealth. But one thing seems fairly certain, namely, that the trend of the ratio of taxes to selling value of real estate in the future will probably depend chiefly upon the rate of increase in the production of wealth and upon the state of public opinion, which ultimately determine policies of public expenditures and of taxation.

<sup>12</sup> The voters of Kansas adopted an amendment to the state constitution at the 1924 election, permitting classification of intangible property and mineral products for taxation. A similar amendment has been defeated at two previous elections.

The 1925 legislature adopted a mortgage registration fee of 25 cents per \$100, in lieu of all other taxes on mortgages; a mill tax of 25 cents per \$100 of money and certain other intangibles; and a 2 cents a gallon gasoline tax for roads.



# INFLUENCE OF CUSTOMER OWNERSHIP ON THE FINANCIAL STRUCTURE OF PUBLIC UTILITIES

By HENRY P. BRUNER

**A**MONG the policies which have been initiated by public utility managements in recent years, probably none has had so profound an effect upon the public's attitude toward utilities as the customer ownership movement.<sup>1</sup> In the field of public utility finance, customer ownership has lately been the most conspicuous development. Its significance is enhanced not only by the general tendency toward diffusion in the ownership of large industrial undertakings, but also by the rapidly increasing volume of public utility financing.

There is no doubt that a utility which has its stock widely dispersed among the customers of its territory is better entrenched in the public favor than one not so situated. There is some difference of opinion, however, as to the economy of this method of junior financing. In reaching a conclusion on this issue, a knowledge of the influence of customer ownership on financial structure proves serviceable.

It is believed that the chief test of the economy of this plan of financing is not primarily the distribution cost, important as that may be. The chief test is the degree to which the scheme results in the maintenance of high credit and low prior charges on a substantial portion of the capital, so that satisfactory dividends may be paid to common

stockholders and a working surplus set aside. Even though the distribution cost of the companies may be found to be less than the usual charge of the investment banker, the savings effected are of minor import as compared with those brought about by that nice adjustment of financial structure which secures the largest proportion of low prior charges consistent with the maintenance of the highest corporate credit. This is the crux of the problem, and an inquiry here should assist in deciding whether customer ownership "pays its own way."

## *What Is a Good Capital Structure?*

In the literature already in the field there is helpful information. It is reported that securities which are protected by earnings after taxes and depreciation of more than twice the amount necessary to pay annual requirements do not bring, in the investment market, a price proportionately higher than do securities protected by approximately twice the necessary earnings. On the other hand, securities which are protected by less than twice the necessary earnings are sold at a proportionately serious disadvantage. Other things being equal, that company pays the cheapest price for its capital which, after providing for all contingencies, taxes,

<sup>1</sup> Customer ownership, according to the usual meaning of the term, implies that some of the employees, as well as some of the customers, own

preferred stock, in rare cases common stock, in their local public utility enterprise or the parent company.

and depreciation, earns its fixed charges and preferred dividends exactly twice over.<sup>2</sup> Judged by investment market sentiment, therefore, a good capital structure permits no more and no less *net* earnings than twice the interest on bonds and the preferred dividends.

The financial plan based on this theory includes common stock, preferred stock, and bonds.<sup>3</sup> The bonds should be limited in amount so that their interest charges are equal to one-half of the earnings available after taxes and depreciation. The preferred stock should be sufficient to absorb one-half of the remaining earnings.

Assuming that this financial plan is the criterion of a security structure which is economically most justifiable,<sup>4</sup> the subsequent analysis is to express the financial structure of each company to be studied for each year in terms of this standard.

If the standard is sound, deviations toward or away from the standard as a result of customer financing will have a bearing upon the economic justification of customer ownership.

### *I. Scope of Study*

This study covers 90 central station companies of both customer ownership and non-customer ownership classification. The gross earnings for these companies in 1923 were \$564,800,000, or 43% of the gross earnings of the light and power industry as a whole. In se-

lecting the concerns to be studied, the approach was made from the customer ownership or Class I companies,<sup>5</sup> since they constitute about one-sixth of the total. Only those companies were selected whose financial statements and balance-sheets were in a generally accepted public utility manual, and which had had customer ownership for a period of at least four years.

No question arises in establishing the first of these requirements, but some explanation is needed for excluding those companies which have not had four or more years' experience with customer ownership. The problem is to determine an index of financial structure with respect to the standard. In solving this problem three considerations make it necessary to consider only companies which have used customer ownership for four years or more.

In the first place, it is impossible in a shorter period to establish a trend which is at all indicative of the normal influence of customer ownership on financial structure. A three-year period or less would be altogether too short a time in which to secure the typical effect of customer ownership on financial structure. As a general rule, when a customer ownership campaign is staged, more money is secured than is needed at the time or within the current year. During the past 15 years the public utilities have doubled their plant capacity each five years. In order to ascertain the typical financial structure, it is

with this standard, the number of times that annual requirements are earned is given beside each index number of financial structure on the summary sheet (Table V). By using these figures it is possible to judge the financial structure of customer ownership companies in accordance with any standard that one may have.

<sup>5</sup> For convenience of analysis, customer ownership companies are placed in Class I, non-customer ownership companies in Class II.

<sup>2</sup> This is the general theory underlying the financial structure as proposed by Arthur Stone Dewing, an authority on public utility finance. See Dewing, A. S., *Financial Policy of Corporations*, Vol. II, chap. v.

<sup>3</sup> *Ibid.*, Vol. II, p. 78.

<sup>4</sup> A few operating men have objected to this plan on the ground that it lacks conservatism. Nevertheless, a study of financial structure does hold the key to an appraisal of the economic justification of customer ownership. For those who differ

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advisable to include two or three financial operations that have taken place in the period studied for the purpose of securing a reasonable index of the trend. This would be a probable experience of most companies within a four-year period, but not within a three-year period.

A second reason is that a period of less than four years' experience with customer ownership is not of sufficiently long duration to cancel, as far as possible, the effect of changes in financial structure resulting from changes in management. A four-year period minimizes the immediate changes, so that a change in financial structure resulting from a change in management will not exert unusual influence on the final index.<sup>6</sup>

The third justification for not including companies whose experience with customer ownership came after 1920 is that the financial structure of these companies was especially influenced by the depression of 1921 and the stringent money market which existed at that time. The companies which went out after money from customers during that period were in dire need, and the indexes of financial structure would be likely to be unrepresentative of the influence of customer ownership.

The necessity, therefore, of having a period of sufficient length to ascertain a representative financial structure, of reducing the effect of changes in management on financial structure, and of requiring a more normal period in which to study the effect of customer ownership than the deranged period of 1920-21-22, makes advisable an exclusion from this study of the companies which inaugurated customer ownership after

1920. Having selected the customer ownership companies, they were subdivided into seven groups according to the numbers of years' experience with customer ownership.

The non-customer ownership class (Class II) was selected likewise from those companies whose annual reports and balance-sheets were available in an accepted public utility manual. Since there was such a large number to choose from, the largest companies were selected with the thought that they would represent most favorably non-customer ownership companies. Inasmuch as all of these companies in Class II could be studied for the full 10 years, it was necessary to select only 37 companies to have a group comparable in "company years" with the 53 companies available for Class I.

### *Method of Study*

It is proposed that the effect of customer ownership be studied with the previously mentioned standard for bonds and preferred stocks represented as 100. Any deviations from the standard are percentage deviations. In any one year, for example, the actual fixed charges and preferred dividend requirements are divided by their standard—one-half of the net earnings available for each. The quotient shows for each year the percentage deviation from the standard structure.

### *Computation of Net Earnings*

At this point the question arises as to the basis for computing net earnings which are available for fixed charges and dividends. There is no uniform

<sup>6</sup> It must be borne in mind that the method of this study is to create such conditions that all other factors which affect financial structure will

tend to be the same in both of the classes studied. If this condition is actually attained, any differences are due to customer ownership.

practice throughout the industry in computing the net earnings which are available for fixed charges. The predominant practice at the present time is to compute the "margin of safety" on bonds before depreciation and various reserves have been deducted.<sup>7</sup> Notwithstanding this current practice, it was deemed advisable, in this study, to compute the indexes of financial structure only after depreciation and the various reserves had been deducted. This represents the soundest method of measuring net earnings available for fixed charges and for dividends. It is the long-time point of view. For a time, all of the income of a company, after the payment of operating expenses, might be regarded as the fund from which annual capital charges could be paid. Nevertheless, any sound administration must recognize the necessity of providing adequately for depreciation and contingencies. Sooner or later these charges will have to be met. Therefore, depreciation and miscellaneous reserves<sup>8</sup> should be deducted from earnings to obtain the most accurate indexes of financial structure.<sup>9</sup>

As many years as were available were used in the consideration of the effects of customer ownership upon financial structure, and the 10 years from 1914 to

1923 were used as the period for studying the 37 firms which did not have customer ownership.

In the comparison of the financial structure of these two classes, the influences of exceptional management, unusually large resources, better situations, or of more advantageous rate-schedules tend to be eliminated as far as possible.

### *Steps in the Investigation*

The first step in this part of the study was to examine the financial condition of each of the selected companies for each year of the period under review. By determining the number of times annual requirements for bond interest and preferred stock dividends were earned, an index in terms of the standard (twice annual requirements) was found.<sup>10</sup> For example, one company with 10 years' experience with customer ownership had about 18% less bonds outstanding in 1914 than were justified by the number of times annual requirements for bond interest were earned; in 1923 the same company had 22% less bonded obligations than the standard. These relationships were expressed as in Table I by the indexes 82 and 78, respectively. Conversely, another company had 38% more bonds outstanding

<sup>7</sup> This is true of most of the "margins of safety" computed in the recent Moody public utility manuals. Bonbright and Company also reports that the number of times that fixed charges are earned is usually computed before depreciation and other deductions have been made. It is the practice for the large majority of companies to do likewise.

<sup>8</sup> In the case of several of the companies this was not done, because no depreciation or reserve figures were given. In order to place all of the companies on a comparable basis, an amount equivalent to 5% of the gross earnings was arbitrarily deducted in the case of these companies. For justification of this method, see the article by Van H. Cartmel, *Electrical World*, Vol. lxxxi, pp. 629-631.

<sup>9</sup> The actual computation of the index of bond and preferred stock issues is a simple matter. One-half of the earnings available after the necessary deductions was divided into the fixed charges for the year, and that figure indicated the proportion of bonds in terms of a standard of 100. One-half of the remaining balance was then divided into the annual dividend requirement for preferred stock. This process was followed for each company for each year.

<sup>10</sup> As previously indicated, Class I companies have customer ownership programs, Class II companies do not have customer ownership programs. Within Class I are seven groups combined according to the number of years that the companies have used customer ownership.

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TABLE I. INDEXES OF BOND STRUCTURE OF  
GROUP A CUSTOMER OWNERSHIP  
COMPANIES, 1914-1923\*  
(Standard bond issue = 100)

Year	Index for Company No. 1	Index for Company No. 2	Index for Company No. 3	Index for Company No. 4
1914....	82	150	97	123
1915....	82	136	82	98
1916....	86	122	76	122
1917....	92	104	98	130
1918....	74	Missing	80	111
1919....	82	114	110	109
1920....	94	116	109	107
1921....	94	112	111	109
1922....	80	128	117	88
1923....	78	120	120	96

Average of 4 companies for 10 years = 103.6

\*Group A companies are those in Class I which have had longest experience with customer ownership.

in 1913 than were justified by one-half earnings available for annual requirements; hence the index for that year was 138. Similar computations were made for bonds as well as preferred stock for the seven groups of companies in Class I (grouped according to number of years' experience with customer ownership) and for all companies in Class II.<sup>11</sup>

The second step was to combine the indexes for the seven groups of companies in Class I into a single index for the class. An average index was computed not only for bond issues, but also for preferred stock issues of all companies having such issues, as well as of all companies within the class, whether or not they issued preferred stock. The resulting index represents the average percentage of net income in terms of standard devoted to the payment of interest on bonds and dividends on preferred stock (Table III).

<sup>11</sup> The indexes for each company are too voluminous to set forth here. Tables I and II are merely samples to illustrate the method employed for each class of companies and for each group of companies in Class I.

### Weighting of Data within Each Class

In preparing Table III a question arose regarding the proper basis for combining these figures within a class and within a group into an index which is most representative of each class studied. Should the companies be weighted according to size? Should they be weighted according to length of experience with customer ownership?

Various considerations affected the decision not to weight the companies according to size. The experience of a large company, it is true, affects a large part of the industry, and secures the benefit of a more capable management. Also, the big company covers a sufficiently large area and deals with a larger group of people so that erratic success or failure receives less weight. Nevertheless, it is still believed that the mere size of the companies should not be the standard for weighting in the computation of the typical index of financial structure for each class. The real objective is the effect of customer ownership upon the management, board of directors, and stockholders in their direction of financial policy. The question

TABLE II. INDEXES OF AVERAGE PREFERRED  
STOCK ISSUES FOR ALL CLASS II  
COMPANIES, 1914-1923  
(Standard preferred stock issue = 100)

Year	Number of Companies Reported	Index for Each Year
1914.....	28	20.6%
1915.....	30	27.0
1916.....	32	27.9
1917.....	30	34.7
1918.....	31	47.1
1919.....	28	44.1
1920.....	26	39.5
1921.....	25	44.6
1922.....	24	42.0
1923.....	23	37.9

Average index of all companies for 10 years = 36.2



of whether the management, directors, and stockholders control large or small organizations has little bearing upon this objective. Moreover, the weighting of the companies in proportion to their size would tend to give double emphasis to those large companies that sold stock to their customers. As previously stated, the large company would possess superior managerial ability. A weighting, therefore, in proportion to size, further increased by the superior financial structure resulting from better management, would obviously be unsound.

On the other hand, the weighting of the different companies in proportion to the length of time that they have used customer ownership is desirable. The variation in the length of period during which customer ownership was used is conspicuous in the case of Class I. For example, during the 10 years, 1914-1923, there are 57 Class I companies for which complete data could be secured. Of these 57 Class I companies, 4 had used customer ownership for 10 years and 21 had used this means of junior financing for 4 years. The remaining 32 companies were dispersed in the intervening period of 9 years. Obviously, the experience of those companies which have used customer ownership longest should receive proportionately the greater weighting. For this reason, a weighting unit of "one company for one year" was arrived at and is the basis of combining the groups within Class I into a single index number in terms of standard.<sup>12</sup>

#### *Computation of "Limited" and "Unlimited" Indexes*

One of the phenomena which was observed was that some of the companies in both groups did not have preferred

TABLE III. INDEXES OF BOND AND PREFERRED STOCK ISSUES FOR CUSTOMER OWNERSHIP COMPANIES, BY GROUPS  
(Standard bond and preferred stock issues = 100)

Group	Index of Bonds	Index of Preferred Stock (Limited)*	Index of Preferred Stock (Unlimited)†
A.....	103.6%	110.4%	80.1%
B.....	115.6	83.0	83.0
C.....	77.7	40.8	27.2
D.....	109.4	55.4	37.4
E.....	122.6	61.3	42.2
F.....	100.9	113.3	59.9
G.....	108.2	91.2	79.8
Weighted Average Index....	107.0	82.3	61.2

\*"Limited" indexes refer to those companies which have bonds or preferred stock, respectively.

†"Unlimited" indexes include all of the companies within the class whether or not the types of securities in question were issued by them.

stocks, and in a few cases bonds were not used for financing.<sup>13</sup> Owing to the peculiar territory in which a company may be located, or a definite bias on the part of local stockholders against an issue of preferred stocks or bonds, it is not altogether correct to attach full significance to such phenomena. A small number of concerns would, in such a case, alter noticeably the figures of the whole class. On the other hand, the averages and the trends are supposed to be typical of the industry as far as it is possible to make them so. It is practically impossible, of course, to equalize absolutely all influences. Since this study includes all of the available firms which have had sufficient experience with customer ownership and the larger non-customer ownership companies, the inclusion of only those companies which have bonds in the bond figures and only those companies which have preferred stocks in the preferred stock figures

<sup>12</sup> This is also the basis whereby the two groups of companies are judged to be comparable.

<sup>13</sup> Noticeably the New England companies, owing to the conservative financial temper of companies in this territory.

TABLE IV. INDEXES OF BOND AND PREFERRED STOCK ISSUES OF NON-CUSTOMER OWNERSHIP COMPANIES

(Standard bond and preferred stock issues = 100)

Year	Index of Bond Issue (Limited)*	Index of Bond Issue (Unlimited)†	Index of Preferred Stock Issue (Limited)	Index of Preferred Stock Issue (Unlimited)
1914.....	65.3%	62.9%	57.8%	20.6%
1915.....	75.0	75.0	62.3	27.0
1916.....	67.9	68.0	55.1	27.9
1917.....	81.7	79.2	74.5	34.6
1918.....	83.3	80.8	91.4	47.1
1919.....	72.0	72.0	94.9	44.1
1920.....	72.8	72.8	85.6	39.5
1921.....	71.7	71.7	92.8	44.6
1922.....	60.9	60.9	84.0	42.0
1923.....	53.5	53.5	79.2	37.9
Average Index.....	71.1	70.4	77.8	36.2

\*"Limited" indexes refer to those companies which have bonds or preferred stock, respectively.

†"Unlimited" indexes include all of the companies within the class whether or not the types of securities in question were issued by them.

would not be completely representative.<sup>14</sup>

It does not seem justifiable, therefore, to secure indexes under either basis of computation alone. Thus, the averages are computed in both ways. The arithmetic average, the median, and the average of the first and third quartiles of only those companies within each class which had the securities in question were first computed. Then the arithmetic average for all of the companies within each class was computed. The computation of the median average index and the average of the first and third quartiles (Table V) was for the purpose of obviating any objections to the use only of an arithmetic average index. The arithmetic average gives perhaps undue weight to the largest items; whereas the median, as the mid-item of a series ar-

ranged consecutively, takes into consideration all the items of a series. It is not affected by the size of the items except at or near the middle of the series. In this respect it is the complement of the arithmetic average.

In addition to the median average, the first and third quartiles were computed in order to give a much more complete expression of a series than could be secured from any one figure. The many indexes of financial structure which have been presented make it advisable to have as few figures as possible on the summary sheet. Thus, only the *average* of the first and third quartiles is presented in each instance.

#### *Method of Measuring the Dynamic Effects of Customer Ownership*

Any averages which are to be representative of the financial structure of the two groups of companies can only portray a static condition, a state that is not real at any period studied. What is also desired is a knowledge of the year-to-year change in the financial structure of the two classes of public utilities. In other words, important information to be secured is whether the long-time trend of changes in financial structure is toward or away from the standard structure, and how rapidly the annual change occurs in the two classes.

This result was accomplished for each of the two classes, and for each of the groups within Class I (Table VI). The least-squares method was used to determine the annual increment or decrement from the standard. The index arrived

non-customer ownership companies (Class II), some issued preferred stock and no bonds; others issued bonds and no preferred stock. Consequently, four series of indexes were computed: two for bond issues ("limited" and "unlimited") and two for preferred stock ("limited" and "unlimited").

<sup>14</sup> All of the companies in Class I had bond issues outstanding; a few, however, had no preferred stock issues. Hence, it was deemed necessary to compute separate indexes for those which issued preferred stock (limited series) and for all companies in the group or class. In the case of

at previously (Table V) was used with the figure for annual trend to determine whether or not the change was toward standard.<sup>15</sup>

These computations yield two types of tests of the effect of customer ownership on financial structure: (1) An index, expressed in four different ways, which shows to what extent outstanding issues of bonds and preferred stock vary from the standard; (2) a percentage which shows the annual movement of bond and preferred stock capitalization toward the standard. When these indexes and percentages for customer ownership and non-customer ownership companies are compared, we have a basis for judging whether or not customer financing produces desirable changes in financial structure.

## II. Does Customer Ownership Lead to Economical Financial Structure?

The significant fact gleaned from this statistical study is that, as a class, cus-

TABLE V. SUMMARY COMPARISON OF CAPITALIZATION OF CUSTOMER OWNERSHIP WITH NON-CUSTOMER OWNERSHIP COMPANIES

TYPE OF INDEX	INDEXES		TIMES ANNUAL REQUIREMENTS ARE EARNED	
	Class I Companies	Class II Companies		
			I	II
Index of Average Bond Issue (Limited).....	107.0%	71.1%	1.87	2.81
Median Index of Bond Issue (Limited).....	101.0	67.3	1.98	2.92
Average of 1st and 3rd Quartiles (Limited).....	100.7	67.7	.....	.....
Index of Average Bond Issue (Unlimited)†.....	107.0	70.4	1.87	2.88
Index of Average Preferred Stock Issue (Limited)*.....	82.2	77.8	2.44	2.57
Median Index of Preferred Stock Issue (Limited)*.....	70.6	66.2	2.83	3.02
Average of 1st and 3rd Quartiles (Limited).....	80.1	67.6	.....	.....
Index of Average Preferred Stock Issue (Unlimited)†.....	61.2	36.2	3.44	5.52

\*"Limited" indexes refer to those companies which have bonds or preferred stock, respectively.

†"Unlimited" indexes include all of the companies within the class whether or not the types of securities in question were issued by them.

TABLE VI. SECULAR TREND IN PERCENTAGE OF STANDARD OF CUSTOMER OWNERSHIP COMPANIES, 1913-1923

Group	Annual Tendency of Bond Issues*	Annual Tendency of Preferred Stock Issues (Limited)†	Annual Tendency of Preferred Stock Issues (Unlimited)‡
A.....	.93%	-.30%	-1.6%
B.....	2.20	.06	-0.06
C.....	1.88	.06	.04
D.....	.92	2.30	1.77
E.....	2.40	-3.68	.24
F.....	1.67	10.20	4.10
G.....	3.52	2.82	9.29
Weighted Average Annual Tendency....	2.18	.97	4.59

\*The annual tendency is designated as positive if it is toward the standard; negative, if it is away from standard.

†"Limited" indexes refer to those companies which have bonds or preferred stock respectively.

‡"Unlimited" indexes include all of the companies within the class whether or not the types of securities in question were issued by them.

tomership companies possessed over the period of this study a financial structure which corresponded more closely to standard than did the non-customer ownership companies. This closer correspondence to the standard financial structure on the part of the first class of companies is substantiated both in the case of bonds and of preferred stock by each of the tests that were made. The arithmetic average of the bond and preferred stock issues of those companies which have such issues (limited series) shows this result. Furthermore, the median index of the bond and preferred stock issues of the limited number of companies indicates the same result. The average of the first and third quartiles of bond and preferred stock issues in each class likewise indicates that customer ownership makes for a more standard financial structure. Finally, the arithmetic average including all the

<sup>15</sup> For example, if the average bond issue for Class II were 70% of standard, and the annual decrement were 1%, the annual change would be away from standard.

TABLE VII. COMPARISON OF SECULAR  
TREND OF CAPITALIZATION TOWARD  
STANDARD, CLASS I AND CLASS II  
COMPANIES

CAPITALIZATION	PERCENTAGE CHANGE TOWARD STANDARD	
	Class I Companies	Class II Companies
Bonds (Limited)*.....	2.18%	.20%
Bonds (Unlimited)†.....	2.18	.29
Preferred Stock (Limited)...	.97	.22
Preferred Stock (Unlimited)	4.59	1.39

\*"Limited" indexes refer to those companies which have bonds or preferred stock, respectively.

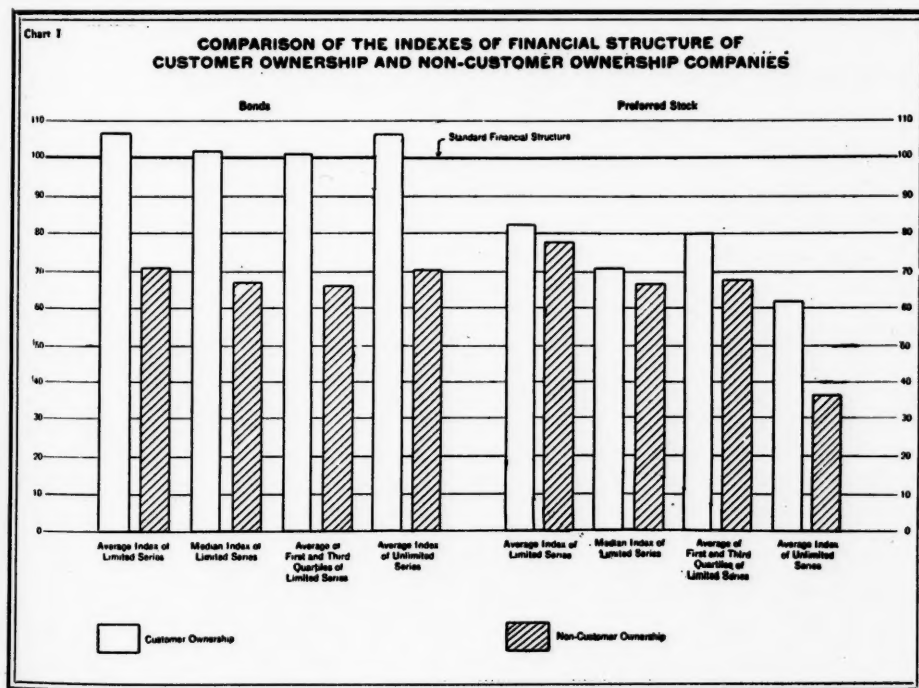
†"Unlimited" indexes include all of the companies within the class whether or not the types of securities in question were issued by them.

companies in each class points to the same conclusion.

The second fact of importance is that the annual change of those companies which have customer ownership is more rapidly toward standard. The bond and preferred stock issues of those com-

panies which do not have customer ownership are more static, as compared with the annual tendency of the Class I companies toward standard.

The conclusion from these figures seems to be definite. As far as possible, the factors of exceptional management and conservative financial policy were eliminated. The point might be raised, however, that this more standard financial structure cannot be associated with customer ownership; that those companies which are interested in securing the largest returns on the common stock naturally have as much capital supplied by bonds and preferred stock as is economically sound; and that those companies which do not have a structure so closely approaching standard could effect the change as readily through the investment banker as through customer ownership campaigns.



If this point be true, it is difficult to account for the complete unanimity on the part of Class I companies in possessing a more standard financial struc-

<sup>18</sup> All other influences were equal so far as could be known. The individual circumstances of each company offered too many complications for consideration in this analysis.

ture in the tests that were made. The fact that all other influences were made as nearly equal as possible,<sup>18</sup> means, the present writer believes, that the differences in financial structure were due primarily to a policy of customer ownership in one group, and a lack of it in the other.



# INCREMENTS IN LAND VALUES IN PHILADELPHIA

By W. N. LOUCKS

**I**NCREMENTS in land values have always been a big factor in attracting investments in land. Tales of fabulous fortunes made from holding land for an increase in value have been uncritically accepted in popular opinion of land investments. Particularly in the fast-growing cities of such a rapidly developing country as the United States the possibility of pocketing relatively effortless gains in land values has lured many investors beyond the boundaries of caution.

Likewise the theory of land economics has been influenced by this popular belief in land-value increments. Land income is frequently cited as an illustration of unearned income. Yet this classification might not have persisted so long if increments in land values had not been unduly stressed.

Both popularly and scientifically two phases of the subject have, as a rule, been inadequately considered. First, the eagerness to find or record increments in land values has dwarfed the equally important search for decrements. Second, the costs or expenses which normally precede or accompany a rise in land values have been either overlooked or only casually taken into account. The practical result to land investors is, all too often, disappointed hopes or financial loss; the result in the theory of land economics is a great deal of loose thinking in the discussion of earned and unearned incomes and value increments in general.

These results became very plain to the writer in the course of a recent

study of the increase or decrease in the values of unimproved land in Philadelphia. The object of the study was to find what increases or decreases had occurred during the period beginning 1880-1900 and ending in 1913. After the data had been collected and tabulated, considerable difficulty was experienced in arriving at a definite answer. Upon examination it was found that the difficulty lay not in the lack of any definite trend in the data but rather in the absence of a clear-cut concept of the term increment. If this concept is clearly thought out, much popular confusion and many conflicting statements will be avoided in the future.

## *I. Should Increments in Land Values Be Corrected for Changes in General Price Level?*

The purpose of this article is to consider some of the questions which arise when one is thinking of an increment in land value and to show how the questions were answered more or less satisfactorily in the study already mentioned.

One of the first questions in the formulation of a definite concept of increment arises from the constant ebb and flow of prices. Should the increase in the selling value of a piece of land be called a true value increment if, coincidentally, a rise in the general price level has also occurred? To state the problem concretely, assume that a certain tract of land having a selling value of \$500 in 1890 was sold for \$1,000 in 1913

and that the general price level was 10% higher in 1913 than in 1890. Is the increment the difference between the two selling values, or \$500, or should the 1913 price be corrected to \$900 for the change in the general price level, in which case the increment is only \$400? As a theoretical proposition, the question is whether increments in value should be computed in terms of nominal values or real values, which are nominal values corrected for changes in the purchasing power of money.

The answer to this question, as well as to the others which will be raised in the course of this article, depends upon the purpose of the study which involves the use of the term increment. If the purpose of such a study is to ascertain whether or not the tract of land was of more importance to society in 1913 than in 1890, then the 1913 value must be corrected for the change in the general price level. From this point of view we are now asking the question: Were members of society in 1913 willing to give up more *dollars* in exchange for this tract of land than they formerly were? The number of dollars given up means little as far as society is concerned. However, if we are thinking of an increment as measuring the increased social importance of a tract of land, we must ask: Were members of society in 1913 willing to give up more *commodities and services* in exchange for this tract of land than they were in 1890? This last question clearly necessitates that before the computation of an increment a correction be made for changes in the general price level.

However, this is not the only point of view one may take in thinking of land-value increments. Another point of view entirely is that of the person who invests money in land in the hope that the increase in value will afford

him a good investment return. From the standpoint of the individual investor it is more difficult to say whether or not a correction should be made for changes in the price level before the increment is computed. Certainly, if a person had purchased the tract referred to in the above illustration that tract would not have represented twice as much actual wealth in 1913 as it did in 1890. The owner, so far as this one tract is concerned, would not have been twice as well off in 1913 as he was in 1890, for that tract did not double in its power to command other commodities and services in exchange. It is no doubt true that some investors do take into consideration the possibility of a change in the value of the dollar and the possible effect of such a change on their investments. It is also true that as the ordinary or usual investor comes to be a more scientific investor, using scientific investment analysis as an aid in placing his investments, the changing price level will come to be more and more recognized as an important item to be considered. However, at the present time, the great majority of investors do not think of changes in the general price level as affecting the worth of the investment. Consequently, if we are looking at increments in land values through the eyes of the average, and not the exceptional, investor in land, we need take no notice of changes in the general price level.

#### *Deduction of Carrying Charges*

A second question which is invariably raised in considering increments in land values is: Should carrying charges be allowed the holder of land before one can say that there has occurred a real increment in the value of the land? Again let us refer to the tract which was

purchased in 1890 for \$500 and sold for \$1,000 in 1913 and let us assume that there was no building on this tract and that the tract yielded no revenue from any other source. At the end of the period during which the owner had held this land the owner's account might appear as in Table I.

What conclusion should be drawn concerning this tract? Has there occurred an increment or a decrement in value? If merely nominal selling values are considered, an increment of \$500 appears. But when the carrying charges are added to the original investment of \$500, the increment dwindles to a minus quantity. In this illustration, therefore, what appeared to be an increment at first sight is really a decrement of \$490 or more. The expenditures listed above are actual visible outlays by the investor and exclude such invisible expenses as the interest sacrificed on money paid in taxes and special assessments. Is it correct to deduct such carrying charges as taxes, special assessments, and interest before computing increment or decrement in land value?

TABLE I. POSSIBLE FINANCIAL ACCOUNT OF HOLDER OF UNIMPROVED LAND

	Expenditures	Receipts
Cost of the tract in 1890.....	\$ 500	
Taxes paid 1890-1913*.....	200	
Special assessments paid for sidewalks, sewers, or street paving*.....	100	
Interest on \$500 borrowed in 1890 to pay for tract (\$500 at 6% for 23 years)†.....	690	
Selling price of land in 1913...		\$1,000
Totals.....	\$1,490	\$1,000

\*To be strictly accurate expenditures should also include interest on the taxes and special assessments from the time of payment to the time of sale of the tract.

†Interest on the money borrowed in 1890 should be figured at compound interest rates instead of simple rates, since the owner had to pay the interest on this \$500 year by year and these payments amounted to an additional investment in the tract. These refinements were omitted, however, in order to keep the illustration as simple as possible.

### *Deduction of Carrying Charges from Social Point of View*

Again the answer to these questions depends upon whether the investor's or the social point of view is taken. From the so-called "social point of view" the problem is to determine the increased or decreased importance of the tract to society as evidenced by an increment or decrement in the value of the tract. So far as the deduction of carrying charges is concerned, the problem is whether or not taxes, special assessments, and interest are social costs. If they are, the social significance of any tract of land cannot be judged before such costs are deducted; but if they are not social costs, no deductions should be made.

The first question is: Before we compute an increment from the social point of view, should taxes paid during the time the land has been held be subtracted from the later selling price of the land? It seems to the writer that they should not be, for a tax which was being levied on the land at the time the holder purchased the land will ordinarily have been capitalized by him and subtracted from the price he otherwise would have been willing to pay. The buyer may not be conscious that he is going through such a capitalization and subtraction process; yet in so far as his buying price is at all influenced by consideration of net income or, more accurately, the expected future net income from the tract, such a capitalization will in effect be made in the calculation of the net income. The fact that the tract is possibly being acquired for speculative purposes does not eliminate the necessity of paying some attention to future net income.

This reasoning, of course, does not apply to new land taxes or unantici-

pated increases in old land taxes which may be levied after the owner acquires the land. These new or increased taxes, in so far as they were not anticipated by the purchaser, represent additional burdens placed by society upon the land. As long as they were not anticipated, they were not discounted in the purchase price and consequently should be allowed as deductible social carrying costs.

To the present writer the controlling principle in deducting taxes as social costs is whether or not such taxes were discounted in the purchase price. If they have been discounted, the original seller has already paid them in reduced price for the land. To allow the holder of the land to subtract them would mean a double deduction or a double weighting of the tax burden imposed by society. On the other hand, if taxes have not been discounted in the purchase price, they should be deducted before computing the increment. Otherwise the tax burden laid upon the land by society would receive no weight in considering the social importance of the tract in question.

A somewhat different answer is required when we come to the second item of expenditure. The issue may be stated as follows: Are special assessments legitimate carrying charges from the social point of view and should they be subtracted before the increment is computed? It seems to the writer that they should be, for these are costs from the social point of view as well as from the individual's point of view. Assessments for street paving and repairs, sewers, or sidewalks are costs which must be borne, and, if society as a whole owned the land, society would have to bear these costs just as the individual has to bear them under our present system of private ownership of land.

We can say, even from a social point of view, that, until the selling value of the land has increased more than enough to cover these costs, which really are investments of capital in the land, there has been no real increment in the value of the land itself.

### *Interest as a Social Cost*

Finally, should interest on the investment be allowed as a carrying charge from the social point of view? On this issue there will be marked differences of opinion. It should be remembered constantly that the tract of land in question is unimproved and no improvements are made by the holder of the land during the period of ownership.

The chief reasons for not allowing interest deductions are first given. If interest charges should be allowed, they would necessarily be compounded. In doing this we should be assuming that the land should increase in value fast enough to be finally as remunerative as an investment in capital goods. From a social point of view this assumption is not justifiable because the mere investment of capital in land—assuming that the land is simply held by the owner who makes no improvements—is not productive, whereas an investment in industry does increase the national product. Certainly if all land were owned collectively by society, there would in all probability be no interest charges. Consequently, such charges must logically be disallowed when we think of a value increment from the social point of view.

It is clear that the justification of allowing interest deductions hinges mainly upon the productiveness or unproductiveness of holding land without making improvements, although the probability of an absence of interest



charges under public ownership of land is also a factor to be considered. On the main point of the productiveness of holding land, opinions differ. Economists, as a rule, have contended that the holding of land for a rise in value is an unproductive activity in so far as nothing is done by way of improving the land. With this contention Dr. Richard T. Ely differs, and, as an expression of his theory he has developed the "Law of Ripening Costs in Land Utilization." According to this theory most land in the successive stages of its development goes through a transition or ripening period in passing from a lower to a higher use. Thus, "in the case of urban land, there is a ripening period in the transition from residential to commercial use." "Theoretically defined," says Dr. Ely, "a ripening use is the holding of land out of present utilization or in a lower use until it is profitable to use it in some higher form." The "Law of Ripening Costs" is briefly stated as follows: "The costs falling upon the holder of land during a normal period of ripening use are socially necessary and properly chargeable to the increment in land value resulting from the change in use." This statement of Dr. Ely's theory implies that the carrying costs while waiting for the higher social use of land to develop must be borne either by society or by private owners. Since they are borne by private owners on behalf of society, they are social costs. Consequently, if one adheres to this theory, the person who holds land during this ripening period should, from the social point of view, be allowed a certain interest charge as a cost of carrying the land.

We must, however, consider the alternative to private ownership of land during a period of ripening use. This

alternative is public or social ownership. If society owned the land during this period, we believe not only that the period of ripening use would probably be considerably shortened but also that society would not have some of the carrying costs which are due to private ownership of land. In fact, loss of revenues from taxation would be the only cost. Although our statement that the mere holding of land is unproductive may have to be qualified in the light of Dr. Ely's theory, nevertheless the fact that interest carrying charges would not be necessary under conditions of ownership by society justifies us in not allowing interest charges as a just claim upon any part of the increment in value when the increment is being considered from the social point of view.

#### *Deductions of Carrying Charges from Investor's Point of View*

On the other hand, different conclusions seem logically necessary when carrying charges are considered from the investor's point of view. In computing the increment to the investor, only new land taxes or increases in old land taxes should be deducted as carrying charges, for, as previously mentioned, land taxes existing at the time that the land is purchased tend to be capitalized and subtracted from what the buyer otherwise would have been willing to pay. It should be recalled, however, that this conclusion is premised upon the investor's judgment of value in terms of capitalized future net income.

Special assessments, however, are real costs to the investor and must be allowed as carrying charges before an increment in value can be computed.

But when the propriety of deducting interest charges is considered, the essential difference between a concept of in-



crement from the social point of view and from the investor's point of view stands out most clearly. The investor in land has a possible alternative investment in industrial stocks and bonds. An investment in stocks and bonds would yield a return from year to year. An investment in land, if that land is unimproved, yields no return year by year. Consequently, the investor in land should receive, when he sells his land, a sum equal at least to the original cost price plus an amount which will compensate him for the loss of interest he would have received if the same amount had been invested in stocks or bonds having approximately the same safety as an investment in land. So, from the investor's point of view, interest carrying charges should be allowed in addition to the other carrying charges that have already been deemed appropriate, and this interest carrying charge should be compounded.

*Formulae for Social and Investors' Increment*

To clarify these various considerations the following formulae are stated:

First: From the social point of view, the increment equals the money value of the tract in the later year (corrected for any change in the general price level which has occurred since the year being used as the base year) minus the sum of the following items: (1) The money value in the year being used as the base year; (2) the amounts paid in unanticipated new land taxes and increased old land taxes since the base year; (3) special assessments paid during this period.

<sup>1</sup>To be strictly accurate we should also add to this list of items to be subtracted from the later value in each case compound interest on the taxes and special assessments allowed as carrying

Second: From the investor's point of view, the increment equals the money value of the tract in the later year (not corrected for any change in the general price level) minus the sum of the following items: (1) The money value in the year being used as the base year; (2) the amounts paid in unanticipated new land taxes and increased old land taxes since the base year; (3) special assessments paid during this period; (4) compound-interest carrying charges for the period between the base year and the later year.<sup>1</sup>

The differences between these two formulae, as will be easily noted, are two in number:

First: From the social point of view there should be a correction for any change which has occurred in the general price level during the period of study, but from the investor's point of view no such correction should be made.

Second: From the investor's point of view an interest carrying charge should be allowed as part of the cost and should be deducted from the money value in the later year before a true increment is computed, although from a social point of view no such interest carrying charge should be allowed.

These differences upon first thought may seem inconsequential quibbles over definitions. But reflection will show that this is not the case. Two concepts of increment are represented by the two formulae presented above. Two entirely different points of view are taken and it is difficult to see how they can be reconciled. When the term "increment in land values" is used, we must accept one or the other of these concepts or compute two figures representing the in-

charges, the compound interest to be computed from the time these taxes and special assessments were paid to the end of the increment period.

# INCREMENTS IN LAND VALUES IN PHILADELPHIA

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TABLE II. INCREMENTS OR DECREMENTS IN VALUES OF UNIMPROVED LAND IN PHILADELPHIA, 1880-1900 TO 1913

ITEMS	CLASSES OF TRACTS			
	I	II	III	IV
1. Aggregate money value in the base year.....	\$ 6,415	\$ 7,185	\$ 7,780	\$ 5,800
2. Aggregate money value in 1913 (corrected for change in price level)....	8,974	10,787	13,793	16,907
3. Aggregate money value in 1913 (not corrected for change in price level)....	11,107	14,100	16,285	22,000
4. Aggregate money value in the base year plus interest charges of 4% compounded annually for the increment period.....	14,331	14,254	19,123	12,979
5. Aggregate increment from the social point of view (item 2 minus item 1)....	2,559	3,602	6,012	11,107
6. Aggregate increment or decrement from the investor's point of view (item 3 minus item 4).....	-3,224	-154	-2,838	9,021

crement, stating definitely which concept is used in each case. This seems to be the only satisfactory way to make perfectly clear how a change in the point of view may change our answer to the question of whether or not an increment has occurred.<sup>2</sup>

The social point of view is taken by those who ask merely: Has the value to society of a certain tract of land increased or not, and how much has been the increase, or, perchance, the decrease?

This attitude one would expect to be that of the single taxer, the socialist, and, indeed, of all those especially interested in the social aspects of various economic problems. The other point of view is that of the investor confronted with alternatives when he comes to in-

vest his money. Shall he invest it in industrial stocks and bonds, or in land? It is very desirable, both practically and theoretically, to clarify our thought and action with respect to increments in land values, but this is a difficult accomplishment unless these two concepts of the term increment, and perhaps others, are precisely defined and logically used. One is led to suspect that sometimes the social reformer, who, as we would suppose, usually takes the social point of view, does not clearly define the increment that he talks or writes about. Instead, he fascinates with tales of large land fortunes; but, since he neglects to define his social point of view, he allows his hearers or readers to think that such increments exist from an investor's

<sup>2</sup>For a study of land values which allows an interest carrying charge and takes the investor's point of view, see G. B. L. Arner's chapter on "Land Values" in *Urban Land Economics*, published by the Institute for Research in Land Economics and Public Utilities. For a study of land values which takes essentially the social point of view, see Scott Nearing, *Annals of the American*

*Academy of Political and Social Sciences*, LVIII, 149-57, March, 1915. Although these authors have drawn definite conclusions regarding increments and decrements in land values, they seem to hold very different concepts of the term increment, and neither of them has stated clearly and definitely the exact concept of increment which he is using in his study.

TABLE III. PERCENTAGE INCREMENT OR DECREMENT IN VALUES OF UNIMPROVED LAND IN PHILADELPHIA, 1880-1900 TO 1913

ITEMS	CLASSES OF TRACTS			
	I	II	III	IV
1. Aggregate value in 1913 (corrected for change in price level).....	100.0%	100.0%	100.0%	100.0%
2. Aggregate value in base year.....	71.5	66.6	56.4	34.3
3. Aggregate value in 1913 (not corrected for change in price level).....	100.1	100.0	100.0	100.0
4. Aggregate value in base year plus interest charge of 4% compound interest.....	129.0	101.1	117.4	59.0
5. Percentage increment from social point of view.....	28.5	33.4	43.6	65.7
6. Percentage increment or decrement from investor's point of view.....	-29.0	-1.1	-17.4	41.0

point of view. Of course, increments can be found even from the investor's standpoint, but those increments will generally be considerably smaller than if they were computed from the broader social point of view.

## II. Increments in Land Values in Philadelphia

Practical applications of these distinctions will help to clarify them and show their significance. As has been said, the necessity of clear definitions became apparent in attempting to measure the increment or decrement in the values of unimproved land in Philadelphia from 1880-1900 to 1913.

In this study it is impossible to follow exactly the formulae suggested above. Limitations of data as well as of available time caused the use of slightly different methods of computation. It will be noted that the only difference is that the two items of new taxes paid and special assessments paid are both omitted from the following formulae. However, the significance of

the theoretical distinctions is not thereby lessened appreciably.

The formulae used were: (1) From the social point of view, the increment equals the money value of the tract in 1913 (corrected for any change which occurred in the general level of prices between the base year and 1913) minus the money value in the earlier period; (2) from the investor's point of view, the increment equals the money value of the tract in 1913 (not corrected for any change in the general level of prices) minus the sum of the following items: (a) the money value in the earlier period, (b) interest carrying charges of 4% compound interest (compounded annually for the period during which the increment was measured) on the money value in the earlier period.

## Method of Study

Fifty tracts of land were used in the study. These tracts were divided into the following classes: Class I, 16 tracts located rather close together in the northern part of the city, each having

a money value in 1913 of less than \$2,000; Class II, 3 tracts located rather close together in the northern part of the city, each having a money value in 1913 of over \$2,000; Class III, 28 tracts scattered over the residential sections of the city, each having a money value of less than \$2,000 in 1913; Class IV, 3 tracts scattered over the residential sections, each having a money value of more than \$2,000 in 1913.

None of these tracts were located in the central business section of the city. All of the tracts were unimproved, that is, contained no buildings during the entire period of investigation. The money value is a selling price growing out of the conveyance of the tract to another owner. All of the tracts studied were sold for a stated consideration in 1913 but the earlier value may be a value as of any year between 1880 and 1900 inasmuch as the tracts were not all sold in the same year during the earlier period. The average length of time for which the increments are computed is about 20 years.

The results of this study are indicated in Tables II and III. Each group of tracts is considered as a whole. Decrements are indicated by minus signs.

Thus, from a social point of view, an increment in the value of the tracts seems to have occurred, each group of tracts being considered as a whole, for in the base years these classes of tracts had money values of only 71.5%, 66.6%, 56.4%, and 34.3% respectively of

their 1913 money values after their 1913 values had been corrected for the change in the general price level. However, from the investor's point of view the apparent increments were really decrements in the case of three of the four groups of tracts, for the values in the base years plus the compounded interest charges of 4% amounted to 129%, 101.1%, and 117.4% of their money values in 1913, since their 1913 values were not corrected for the change in the general price level. In only one class of tracts is an increment shown to have occurred from an investor's point of view.

### III

These figures should emphasize the enormous influence the concept of increment has on the correct answer to a question such as that raised concerning unimproved land in Philadelphia. In this study to change the concept is to change the answer. If the samples used in this study accurately reflect conditions as to the unimproved land in residential sections, we can say for Philadelphia that from the social point of view there has been an increment in land values but that from the investor's point of view there has been, in general, a decrement rather than an increment. In any investigation concerning increments in land values the concept selected for use must depend upon the purpose of the investigation. Otherwise the results obtained will necessarily be misleading.

# SCIENTIFIC REAL ESTATE MERCHANDISING —THE PROFESSIONAL IDEAL

By A. G. HINMAN

**W**HY is it that law and medicine are usually classed as public callings and that the real estate business generally is not? Public opinion recognizes that the practice of law and medicine is vital to human welfare and progress; the services of untrained lawyers and physicians are no longer acceptable. Public opinion and legal requirements make it necessary for a man who would enter either of these callings to recognize and accept a measure of public responsibility and to undergo the thorough training which is essential to the establishment and maintenance of high standards of conduct. These two things—public demand for a high quality of service and recognition of the need for scientific education—give to law and medicine the status of professions.

The real estate business is now bestirring itself to reach professional status. In the opinion of many observers it has already made greater progress along this line than any other vocation in an equal length of time. The forces behind this movement come both from within and without the business. Mr. Herbert U. Nelson<sup>1</sup> expressed the ideals of the leaders in the business, which have culminated in a Real Estate Code of Ethics. Furthermore, public opinion outside the ranks of real estate dealers has spoken through the real estate licensing laws which have been passed in 17 states since 1917. Here is evidence of that

general recognition of the social importance of a business which impels the adoption of professional standards of conduct.

## *Social Importance of Real Estate Merchandising*

Aside from this objective evidence, real estate merchandising in its very nature is a public calling for two reasons: (1) the essentiality of the commodity handled to the welfare of millions of people, and (2) the tremendous power of those engaged in the business to harm others.

To the poor and middle classes of society the ownership of real estate is vital to economic improvement. It is literally true that real estate sales record the investment of the savings of millions of people. Because private property in land is the beginning of thrift, competence, and the recognition of civic responsibility, the ownership of real estate is essential to the economic and political development of society as a whole. President Coolidge voiced this thought in his address to the 1924 convention of the National Association of Real Estate Boards when he said, "The ownership of a home, the feeling of independence that comes with the possession of a bit of the earth, are among the most powerful incentives to high civic interest and usefulness."

The power for harm which those engaged in the real estate business possess arises from the lack of those very requirements which are essential to a profession. Real estate merchandising has

<sup>1</sup> Nelson, Herbert U., "The Real Estate Code of Ethics," *THE JOURNAL OF LAND & PUBLIC UTILITY ECONOMICS*, July, 1925.



required in the past little capital, character, or capacity. It has been a calling easy to enter and easier to leave. Added strength is given this power to harm by the general ignorance of land economics—the science of land utilization. There is no other commodity more widely used, more generally invested in, and yet so little understood by those who invest in it, as real estate. Thus the real estate dealer, through his own ignorance or by taking advantage of the ignorance of others, may easily engage in practices inimical to public and private welfare.

### *Significance of Scientific Training*

Many real estate dealers themselves appreciate this situation, and their efforts to professionalize real estate merchandising prove their good intentions. Good intentions can and must be encouraged by state regulation and the enforcement of self-imposed codes adopted by associations of real estate dealers; but that is not sufficient. Real estate merchandising will never develop professionally to any great extent on merely good intentions. The duties and obligations of a public calling require not only the desire, but also the ability, to serve well. Unethical practices can be minimized by legislation, but the average ability to serve can be improved only through scientific training and education.

The present educational movement in the real estate business is a good start, which, if continued, is bound to bring beneficial results. It is so easy, however, to swerve from the main road in such adventures that the writer believes a restatement of the ends of scientific training in real estate merchandising will be timely. The ideal of public service has been set up to temper the

desire for profits—a conflict between public service and private advantage. Furthermore, in order to win support for the new idealism, it has frequently been said that public service pays in the long run from the dollars-and-cents point of view. This argument has some dangerous aspects because the habit of looking for immediate profits in buying and selling commodities is so strongly entrenched that it is easy to slide back to the older point of view. The only way to avoid this pitfall is to restate continually the ends of scientific training and what these ends involve in the daily practices of real estate merchandising.

Scientific real estate merchandising requires (1) an understanding of the nature of the commodity, (2) an understanding of the character of the real estate market, (3) the development of an organization and acquisition of the equipment necessary to effect satisfactorily the transfer of the commodity in the market, and (4) the recognition of the necessity for a high degree of co-operation among competitors. To explain these four requisites of scientific real estate merchandising is the purpose of this article.

### *I. Real Estate as a Commodity*

Real estate is a most complex commodity. Its kinds and classes vary so widely in peculiarities and characteristics that people generally find it difficult to understand. Hence, the public has the right to expect the person offering to serve in this calling to have such knowledge and understanding. Unless the dealer in real estate does know his commodity, what right has he to expect the customer to depend on his statements and advice? A large part of the selling effort of realty salesmen is discounted by the prospective customer be-

cause his confidence in the ability or integrity of salesmen has not been won. Sales resistance in real estate selling to a great extent consists of a generally prevailing disposition not to accept dealers' statements at par value. And do not many pages out of the history of real estate merchandising justify such an attitude? Happily this attitude toward real estate dealers is passing.

## II. Knowledge of the Market

Understanding the real estate market is the second requisite. Although the conduct of the real estate business should be shaped according to the character of the market, the possibilities of market analysis have hardly been exploited at all. Scientific operation requires that brokers understand why people buy real estate, what types of real estate they buy, when they buy, where they buy, and, not of least importance, on what terms they will buy.

The most tangible expression of the character of the real estate market is the price at which the commodity sells. An understanding of the character of the supply of, and the demand for, real estate, the seasonal and long-time trend of prices, and the economic basis of realty values, should enable the dealer to perform effectively one of his most important economic functions—the pricing of real estate. Correct pricing of goods is as essential as careful selection of goods. The dealer who understands his commodity and its market should be able to anticipate rather closely the probable selling price of realty. The demand for real estate cannot be divorced from price. At every price the demand is different, but at the right price the demand for realty is sufficiently effective to take it off the market in the desired time. The principle that

the right price will move more goods at a profit than any other price holds true in the selling of real estate.

### *Unscientific Listing*

Brokers often pride themselves on the great number of listings which they have in their files. But two or three thousand listings, unless properly priced, may well be worth less than a few hundred, correctly priced. In fact, a listing priced too high or too low is a liability rather than an asset. If a listing is accepted at too high a price, the owner will be dissatisfied at the failure of his realty to sell; if priced too low, the seller may well be disgruntled when he finds that a higher price would have been justified under the circumstances.

The notion prevails that since the realty broker acts only as agent, he need not be concerned with the character of the goods he has to offer or the price at which he offers them. And that is one reason why the real estate market is slow and why real estate selling is often inefficient. The dealer who is unsuccessful in disposing of a listing within a reasonable time loses the good-will and probably also the future business of the owner. Acceptance of a listing involves the obligation to render service. Listings are thus entirely comparable to goods on a merchant's shelves—they cannot be carried without cost if the dealer makes any attempt at fulfilling his listing contract. Advertising and sales effort are partially or wholly wasted when applied to overpriced realty. It has been proved that the failure of a system of multiple listing in a certain middle-western city was caused by a lack of care in the acceptance of listings.

It will remain the prerogative of the owner to determine the price at which

he desires to sell, but the realty broker can, without seeming to usurp this right, secure listings correctly priced. Owners who are not anxious enough to sell at the market price should find it difficult to have their realty accepted for listing.

### *The Demand for Real Estate*

Fundamental to the problem of pricing real estate is the question why people demand real estate. Some people buy real estate to use for home purposes, others for business purposes, and still others for investment. Utilization is the basis for the selling appeal, and to ascertain these bases the broker must be thoroughly conversant with the reasons why people want real estate.

Just as any merchant must know what merchandise is most salable in order to stock his shelves wisely, so must the real estate dealer know what types of realty people will buy, if he wishes good listings. Before he can know what to sell, what listings to try to secure, or even what listings to accept, he must know what realty is salable: what people are buying.

Again, if a dealer wants to economize his selling effort and not waste it through inopportune activity, he must know when people buy real estate. In other words, an understanding both of the general trends and of the special occasions which affect the demand for real estate is essential. The real estate market develops, for instance, certain seasonal trends. There are periods of the year when people will buy real estate more readily and in greater volume than at other times. In many northern cities the market for dwellings becomes very dull after the winter's coal has been delivered. Again the demand for real estate is greatly influenced by im-

portant life events: marriage, change of occupation, birth of children, sudden acquisition of wealth, and the like. These are often the occasions for the purchase of real estate, and in the main are regular and dependable occurrences of which the broker should inform himself. Chart I, showing the total real estate sales in dollars and cents in Madison, Wisconsin, by months for 1924, exhibits distinct seasonal trends. A careful analysis of the causes of such trends gives very helpful guides to real estate dealers in adapting their activities to market conditions.

### *The Potential Market*

A great many factors contribute to limit the extent to which any dealer may hope to reach the entire potential real estate market. The potential market constitutes the total possibilities for the sale of real estate. In general, it is limited by the total amount of realty and the turnover in that realty. In a small community made up largely of retired farmers, the property turnover is likely to be slow and the potential market small. Such communities are very commonly overstocked with real estate brokers who find it hard to make a living and wonder why. In a rapidly growing industrial or commercial city or in an educational center where there is a relatively large transient population, the property turnover is likely to be rapid and the potential market large. New York City, where 87.3% of the homes are rented, constitutes a different market from Philadelphia, where almost 40% of the homes are owned by occupants.

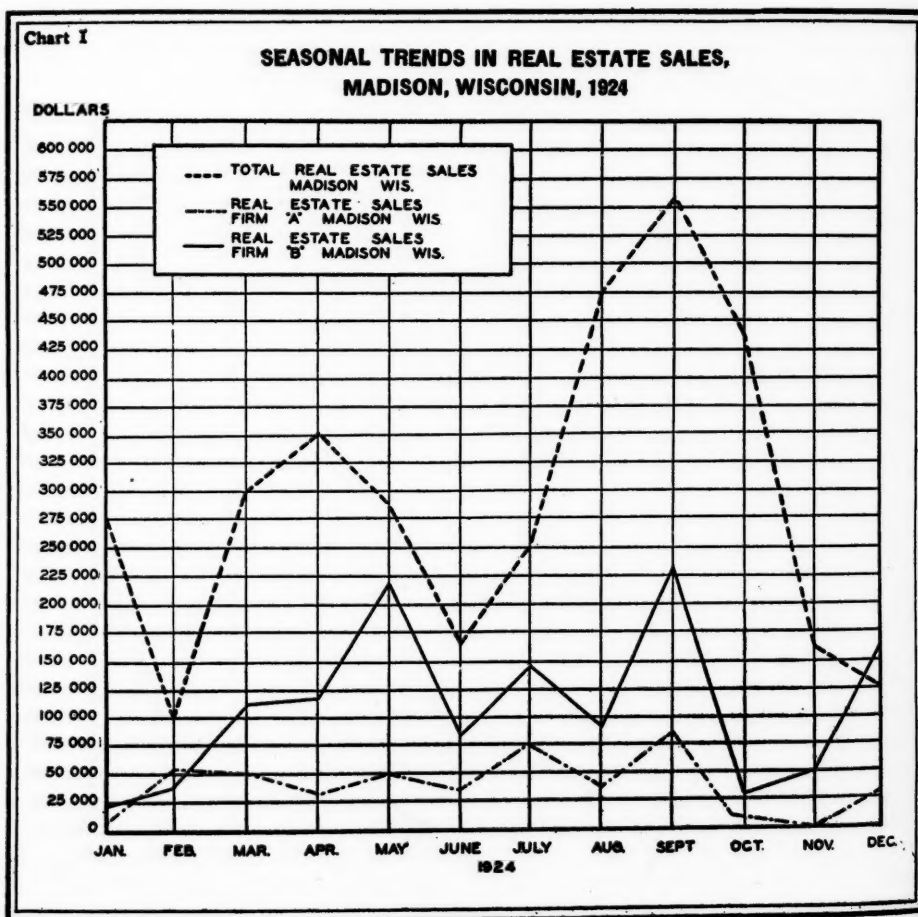
The part of any potential market for real estate which a dealer may hope to serve is limited by the number of buyers who can profitably be served. This,

in turn, is determined by his physical ability, his selling costs, and his goodwill.

By developing a large organization, fully equipped and with adequate financial strength, the real estate business may be conducted on a comparatively large scale. Access to a large market may thus, in some instances, be obtained. The possibilities, however, are sharply limited by the cost of selling. Many city real estate dealers have abandoned the selling of farm lands because distance and the time and expense involved

have made it unprofitable. Hence, their actual accessible market has been automatically restricted to the metropolitan area by the cost of doing business at a distance.

Good-will increases the size of the accessible market. It is a matter of buyer's preference among competing firms, determined largely by natural prejudice, the character of the real estate firm, and the efficiency of its service. It is true that the poorer classes will often take their real estate problems to a small, around-the-corner dealer rather than to





a larger broker more centrally located—a natural prejudice resulting from fear that the service of a larger firm is more costly, from timidity, or from some other usually unfounded reasons. Thus the larger firm may find that it is excluded from the market for the lowest-priced realty. In many cities the business of foreign groups is not obtainable except by some one of the same race. Finally, the ill-will which comes as a result of a reputation for inefficiency or dishonesty will most effectively limit a firm's accessible market.

In other cases the firm may be of a specialized character, dealing largely in business property, for instance. This type of firm is limited to a much smaller potential market. Such specialization does not usually become profitable until the readily accessible market is very large, and hence, specialization is rare except in the larger cities.

A survey of the business organization of 263 leading real estate firms in the larger cities of the United States made by the Institute for Research in Land Economics and Public Utilities discloses some facts as to specialization and departmental organization. The results of this study are summarized in Table I.

### III. Organization for Scientific Service

Another essential to a scientific merchandising service is the right form of business organization. In real estate, permanency is a matter of first importance. People as a whole do not like to deal with "fly-by-night" concerns, so there is an increasing preference for firms which give promise of remaining in business permanently.

Two important factors affecting public judgment in this connection are the form of the organization and its personnel, principally the personnel. Many

TABLE I. DEPARTMENTALIZATION OF REAL ESTATE FIRMS

Type of Activity	Percentage of Total Firms Reporting Which Engage in Activity	Percentage of All Firms Engaging in Activity Which Have Men Specializing	Percentage of All Firms Engaging in Activity Which Have Special Departments
Brokerage			
Residential.....	100	29	21
Commercial and Industrial.....	86	29	21
Unimproved.....	86	7	..
Subdivisions.....	6	100	..
Farms.....	79	8	8
Operation			
General.....	50	..	..
Subdivisions.....	31	80	80
Management.....	50	..	13
Rentals.....	43	28	86
Leases.....	36	..	..
Construction.....	31	20	60
Appraisals.....	14	..	..
Auctioneering.....	7	..	..
Insurance.....	50	..	75
Loans (Mortgages)...	63	10	80

forms of business organization are available. The type of organization selected should fit the peculiar circumstances of each case. The corporate form of organization affords certain advantages in the way of permanency and adaptability to large-scale operations. However, most real estate firms, because of the limitations of the market that can be served, are small-scale and local in character. They are more commonly partnerships and individual organizations with which personnel is the important consideration. The judgment of customers is based upon the reputation of the members of the organization as to capital, character, and capacity; that is, financial resources, personal integrity, and business ability. It is of utmost importance that the real estate dealer appreciate this principle of permanency and understand how he may avail himself of it.

Permanency is essential to institutionalization, which may be defined as the establishment of a firm identity, of a distinctive personality which is made



manifest to the public by a firm's methods of operation and the quality of service. Real estate dealers have to offer more or less the same commodity, and this is particularly true under systems of multiple listing. The character of the real estate firm as an institution thus remains the chief determinant of customer choice.

In addition to the permanence of a firm, the reputation for good administration affects a customer's choice. This is an essential to business conduct which expresses itself in sound selling policies and intelligent management.

#### *Importance of Sound Selling Policies*

Wise sales policies may be considered the keystone in building good-will, and the necessity of maintaining good-will is a spur to more efficient public service. But policies as to what to sell, to whom to sell, when to sell, and how to sell, must be determined upon the basis of market analysis. This involves careful consideration of the types of realty which should be listed, the market which is to be the objective, the means of ascertaining the character, extent, and time of market demand, as well as the types of sales methods which are to be employed.

General merchandising policies define the character of the firm. Some firms deal in "wild-cat" real estate and others do not. Some will sell on most slender margins to people of limited income and resources, and others follow more commendable policies. Some dealers in real estate take the long-time point of view and adopt as a general policy the slogan, "The customer must be satisfied and remain satisfied," while others follow the ways of those who in the past have brought not a little disrepute to the calling as a whole.

Particular methods need to be evolved for applying general firm policies to specific situations. In working out the financial plan according to which properties are to be developed or sold, it is necessary to evolve particular methods which are in accord with firm policies. There is the case of a firm which, as a result of insufficient preliminary analysis, failed to appreciate that settlers under most favorable circumstances need from 10 to 25 years to pay for their purchases of farm lands. The result of this lack of understanding was a wrong financial policy which did not provide sufficient capital to carry the firm's investment over the long period of time during which only small payments could be made. The end was failure. This illustration may be duplicated many times over. It shows that wise policies, general and particular, are based upon thorough knowledge.

Management involves the supervision and checking of all activities of the business. The first duty of management, in order to put right policies into operation, is to build up an effective office organization, the second is to develop an efficient sales force, and the third is to formulate sound advertising plans.

#### *Office Organization*

It may seem superfluous to point out to a real estate dealer the importance of the location of his own office. Frequently a dealer has much to say to others about location values but overlooks this factor in placing his own office. An easily accessible site and a convenient arrangement of the interior make a pleasing impression on customers, the importance of which should not be slighted. Neatness, order, and proper lighting contribute materially to this end. And it is a factor of some sig-

nificance in formulating scientific merchandising policies.

A factor of comparable importance is a systematized office routine, so that all orders are carried out promptly and correctly, that full reports are made of all desirable information, and that all information is so recorded and filed that it can be handled automatically and made available for use upon a moment's notice. However, office organization should be built up to meet the particular needs and conditions of every firm. There is no acceptable standard, and any attempt at transplanting systems from one office to another will probably not work out as expected.

### *Developing an Efficient Personnel*

It is through the sales force that the real estate firm establishes contact with the market for its commodity. The sales force, above all, demands careful attention if it is to be efficient. The development of a sales force involves (1) the scientific selection of salesmen, (2) equitable compensation, and (3) the provision of training facilities.

Salesmen should be selected upon a basis of cool, careful analysis and not by intuition or "hunch." The analysis must include both the job and the man. Study of the selling job by the employer should result in a decision as to the qualifications which are desirable in the man who will fill it, and in giving to each qualification a numerical weight according to its relative importance. Applicants, then, should be carefully tested for their fitness upon this qualification basis. The writer made inquiry of the leading firms in 26 American cities as to what qualifications were most desired. Table II expresses the consensus of opinion of a large number of able managers on this question, both as to quali-

fications and as to the numerical weight of each.

TABLE II. RELATIVE IMPORTANCE OF A SALESMAN'S QUALITIES

Quality	Relative Importance
1. Integrity .....	63
2. Personality .....	52
3. Ability .....	26
4. Initiative .....	19
5. Perseverance .....	19
6. Ambition .....	17
7. Education .....	16
8. Industry .....	16
9. Experience .....	15
10. "Vision" .....	11
11. Local acquaintance .....	10
12. Ability to close sales .....	10
13. Sincerity .....	7
14. Enthusiasm .....	6

Equitable compensation of salesmen will both reward and stimulate their efforts. It must be neither too high nor too low. One is as great a mistake as the other. It should be realized, too, that the method of payment is as important as the amount of the payment; salary, commission, salary and commission, or drawing accounts—each produces a different effect upon the sales effort.

The training of a salesman secures not only better selling upon the part of each salesman, but it secures a higher morale in the sales force as a whole. Some real estate firms conduct "office schools" of their own, while others cooperate with educational institutions in the conduct of courses. Proper selection of salesmen provides good material, equitable compensation provides stimulus, and training provides ability, all three of which are essential to an efficient sales force.

In connection with training, it may be well to point out that frequently so-

called "high-pressure" salesmanship creates distrust rather than confidence. In the older professions, the high standing and reputation of an individual rest mainly upon soundness of knowledge and a dignified presentation. Surely the truly professional training of salesmen requires instruction not only in the commodity and its market, but also in presenting sound information so as to win the confidence of customers. The test is not how soon a customer may be won over, but how well the service may be given. For this reason it behooves the real estate dealer to make a serious study of his advertising problems and formulate his advertising plans upon a basis of good judgment. It is important that the money appropriation be adjusted to selling cost and to the amount of advertising needed for different types of real estate. A dealer should judge advertising mediums from the standpoint of their effectiveness, and not waste money in useless novelties. Furthermore, much time and effort should go into the preparation of advertisements, in order not to rush them through in a hurry at the last minute. Advertising that is hastily prepared does not get results commensurate with its cost, nor is it good service. Moreover, it creates a poor impression of the firm under whose name it appears.

#### *IV. The Value of Cooperation*

Cooperation among real estate dealers is, in many respects, the most important factor in raising the service to the status of a public calling. It is the leaven in the loaf. The experience of recognized professions, such as law and medicine, shows that progress comes from cooperation more than from severe competition. Through cooperative effort, real estate service may be stand-

ardized, stimulated, and regulated. Otherwise the professionalization of real estate merchandising cannot be adequately accomplished.

Cooperation in the real estate business makes possible a clearing-house for ideas and practices. It leads to the elimination of bad practices and to gradual acceptance of those which experience has proved to be sound and successful. The National Association of Real Estate Boards and its local member boards are engaged earnestly in just this sort of work.

Stimulation comes as a result of group effort. Men lagging behind are stimulated by those who have gone ahead. Likewise the development of a spirit of cooperation augments that spirit of professional service which manifests itself in improved business ethics and greater efforts towards public usefulness.

Standardization and stimulation lead necessarily to regulation, which is a protective measure to consolidate the gains already made. It is being carried out both within the cooperative organization itself and in cooperation with state authority. The National Association of Real Estate Boards both regulates its membership and aids in the enactment and enforcement of state licensing laws. Many local real estate boards are carrying out similar regulatory programs of their own. The Madison, Wisconsin, Real Estate Board, for instance, requires the passage of a formal written examination before admitting to membership. To provide the necessary opportunity for study, it has cooperated with the Institute for Research in Land Economics and Public Utilities in giving a course in real estate practice. Quite recently this board admitted to membership the first man in the United States to be-

come a member of a real estate board on the basis of such an examination.

Such activities as are being carried on toward the professionalism of real estate merchandising are of distinct public importance. Mistakes doubtless have been made, are being made, and will be made, but they are of minor significance beside the fact that a professional spirit

is manifesting itself in this public calling. It is to be hoped that increased research, study, and training, the scope and specific ends of which the writer has attempted to restate, will continually uncover sound principles and so lead to their general practice as to result in truer expressions of the professional ideal of scientific service.

## DEPARTMENTS

The departments of the JOURNAL are edited specifically with regard to their interest to the readers who are especially concerned with the economic problems of land and public utilities. For the most part the material for the departments will be prepared by members of the staff of the Institute for Research in Land Economics and Public Utilities.

### BOOK REVIEWS

This department contains critical reviews and brief notices of new books of interest to the readers of the JOURNAL.

- LAMAR LYNDON, "Rate Making for Public Utilities" ..... *Marcus Whitman* 489
- H. F. CLARK and F. A. CHASE, "Elements of the Modern Building and Loan Association" ..... *A. W. Jamison* 491
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### COMMENTS ON LEGISLATION AND COURT DECISIONS

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## BOOK REVIEWS

Lyndon, Lamar. *RATE-MAKING FOR PUBLIC UTILITIES*. New York: McGraw-Hill Book Co., Inc., 1923. pp. vii, 209. \$2.

The task of making rates for public utilities has long given rise to problems that are among the most important and controversial in the whole field of public utility economics. Numerous books and articles dealing with the interrelated valuation and rate-making problems have appeared within the past few years. In many of these works the authors have been content merely to review the various decisions of courts and either accept or reject them with little analysis or comment. Mr. Lyndon notably departs from this common method of treatment, for he correlates the trend of judicial opinion with the economic conditions actually prevailing at the time of the several decisions. He has furthermore a keen conception of the real legal and economic nature of public service enterprise, which shows itself in his own views upon valuation.

The first chapter of the book deals with the general theory of rate-making. Here the author makes clear the peculiar legal and economic nature of public service industries as distinct from ordinary competitive businesses and thus lays the foundation for the investment theory of valuation to which he adheres consistently throughout. The author's convictions on the investment standard are constantly apparent in the discussion of various rate-making problems. There can be no question that a proper solution of rate-making problems hinges upon sound views of the valuation problem in general.

Thus equipped with the general principles and point of view of public util-

ity rate-making, the reader is plunged immediately into an intensive and well-organized treatment of the most important angles of the problem of depreciation. At first thought, this lengthy chapter of rather specialized material seems a little out of place so near the beginning of the work. For relatively immature students this chapter might better come later in the book. Nevertheless, from other points of view, the arrangement may be justified. Very evidently the author wishes to make clear at the outset the fundamental significance of depreciation in any scientific treatment of rate-making. He points out the confusion that has existed in the minds of many business men with respect to the true nature and purpose of depreciation. The author's view is best expressed in his own words, namely, "that the depreciation allowance is nothing more nor less than the repayment to the investor of moneys advanced by him for materials and apparatus which have been consumed to meet the public need" (p. 51). This view of depreciation logically goes hand-in-hand with the investment or historical cost basis of valuation.

Lest the reader think the investment standard is the only meritorious theory, the third chapter appropriately contains a critical analysis of the cost-of-reproduction standard and methods of valuation in general. The author recognizes the fact that courts have tended in the past to accept the reproduction standard of valuation. To this fact, however, he attributes no great significance. "Court decisions in the earlier days of rate regulation were made on the best basis then applicable" (p. 61). Cost records then were largely either non-

existent, inadequate, or inaccurate, and under then prevailing price levels cost of reproduction differed but little from a fair actual cost. "The conditions, however, have greatly changed," both as to the adequacy of cost records and the divergence of price levels. From this standpoint the author criticizes the various meanings of cost of reproduction and the several elements which have been urged as entering into a consideration of cost of reproduction.

In the succeeding chapter Mr. Lyndon returns to a discussion of valuation by the "Historical Cost" method, which he, himself, favors. The "Wisconsin Method" of obtaining historical cost is used for purposes of illustration. Thus, "Cost of Establishing Business," or accumulated deficits in net income which have not been made up out of subsequent earnings, are included in the valuation.

The treatment of "Intangible Values" is brief but, on the whole, complete. Those discussed include promotion charges, bond discount, errors and omissions, cost of establishing business, contingencies, engineering, general contractor's profit, interest during construction, insurance during construction, taxes during construction, and franchises.

In Chapter VI the place of "Modifications of Capital Account" in valuation practice is discussed, including the treatment of the purchases of other plants, excess land and equipment, and additions made from surplus. The general problem of valuation would be insufficiently covered without the ensuing chapters on rates of return—legal, reasonable, and expedient—and operating costs. For good measure there is added a supplementary discussion of the "Increase in Population of Cities."

The first nine chapters of the book,

as outlined above, may be said to deal with the general level of rates. The four remaining chapters tell how, in practice, specific rates in different types of public service industries are fixed in order to attain a general level of rates yielding a fair return upon the previously determined fair value of the properties. The specific rate schedules included are those for gas supply, electrical supply, electric railways, and telephone service.

On the whole, the material presented is well organized. The book affords, in small compass, a survey of rate-making problems. To some readers, depending upon their interests, the distribution of emphasis on various aspects of rate-making may seem questionable, but for the purposes actuating the author the emphasis is appropriately placed. It is too often forgotten by the layman as well as the close student of the problem that the making of specific rates cannot be divorced from the general subject of valuation. Hence, the author properly begins with a discussion of the broad theoretical principles underlying rate-making and valuation, and then proceeds from the determination of rate levels to the more limited and technical problem of making specific rates for various kinds of service. In that connection the author's criticisms of loose valuation and appraisal methods, such as the indiscriminate use of percentages where there is no relation between the items being compared, are direct and well merited.

Although the book is written especially for the use of technical men, its theory and the common sense supporting it can be easily comprehended by the average reader. No doubt there will be disagreement in some quarters with Mr. Lyndon's strict adherence to the investment standard of valuation,

but it cannot be said that he overlooks the opposing point of view. A sharp divergence of opinion is to be expected in such a complicated subject that has been inadequately explored in the past. And much remains to be done, although Mr. Lyndon's work merits careful consideration.

MARCUS WHITMAN

Clark, Horace F., and Chase, Frank A. *ELEMENTS OF THE MODERN BUILDING AND LOAN ASSOCIATION*. New York: The Macmillan Company, 1925. pp. xviii, 540. \$4.

THIS new member of the Land Economics Series, Number 4 in the Standard Course in Real Estate, deserves careful study on the part of any one who aspires to become really efficient as a realtor. With the rapid advances in real estate costs, the necessity for the real estate man to assist in the financing of his sales is becoming more and more apparent. And for the great middle class depending on wages or moderate salaries, and rarely becoming possessed of a considerable sum at any time, the building and loan scheme, with its amortization principle and regular, moderate payments, is almost ideal.

The authors have faced the difficult twofold task of preparing a text-book, as well as a compendium, which covers almost the whole range of loans of this type with their ramifications. As a text-book, the book is rather difficult reading for the average student. For most students a unifying thread running throughout a book is a great help in giving a perspective of the whole subject and in assisting the inquiring student's judgment of the relative importance of the many features of such financial institutions. The use of graphs, maps, and diagrams is also a great aid to a comprehensive and balanced view of

the subject-matter. In this respect the authors advantageously might have been less sparing, although devices are more frequently used than in other books on similarly complex subjects. Nevertheless, the student of finance will find in this book the only adequate treatment of these institutions; by itself this is a worthy recommendation.

Whatever faults may appear to the teacher, the book has the great virtue of being the only comprehensive survey of building and loan associations of all types, and as such it is particularly valuable not only to students, but also to association officers and members. Previously the reviewer has found only scattered material on the subject. Despite some improvements in organization of the material that might be made, the encyclopedic character of the book makes it invaluable for the desk of the association officer, especially if he is of small experience, for the repeated warnings as to caution and the maintenance of ethical standards will be of value to him.

When one dips into the book, appreciation of the task performed by the authors grows. The book is divided into seven parts so that if one's interest be in some particular direction it is easy to cover the ground. An appendix of 24 pages and a glossary of 6 pages should prove useful. It is the kind of book of which an association might well have a few copies, to be lent to inquiring and prospective members. The authors have been painstaking in their efforts to make clear the meaning of uncommon terms, and even without reference to the glossary a reader need know little of banking, commercial, or legal intricacies to understand what is meant.

The book begins with a discussion of the association and its function in the

financial fabric of society, and the theory underlying its organization and operation. There is a good analysis of these matters and a logical explanation of why an association can pay such a high rate to savings members in comparison with that charged borrowing members. And high tribute is paid to the able and altruistic citizens who render services without charge and make such saving possible.

The explanation of the exact procedure by which one secures a loan and pays it off could well be read by every prospective borrower. As the authors point out, the busy secretary, perfectly familiar with all details, is apt to glide swiftly through a routine explanation, probably covering every essential point, but so sketchily that the new member has no very clear idea of just what is to be done, nor how it is done. The two ideals of thrift and home ownership are emphasized again and again throughout the book, although in Chapter XXII there is a discussion of the inadvisability of home ownership under certain conditions. The essential differences between building and loan associations, on the one hand, and banks and mortgage loans of the ordinary types, on the other, are carefully pointed out. The peculiar functions of the former and the almost unparalleled safety of its loans are properly stressed. The critical discussion of the various "plans" and types of associations is worthy of careful study by every group contemplating the formation of an association.

In the chapter on personnel the requirements for a proper secretary indicate such a superman that the prospective candidate might almost be discouraged, but this office is of such overwhelming importance that a long search for the right man and dissatisfaction until he is found are fully jus-

tified. The altruistic foundation of this type of financial organization is not overlooked, and it is a fine comment on the generosity of busy men that they do serve as officers effectively and for such meager rewards. If men are virtually giving their services to the community, it would seem that the refusal to grant loans for construction purposes, as some associations do, is a very great limitation of the service that might be rendered. The authors apparently approve this limitation, neglecting what appears to the reviewer to be an inestimable service that might safely be given, if a few suitable safeguards were established. It is pointed out again and again that the purchase or building of a home by an individual is usually a unique event; the experience is not often repeated. How, then, can it be expected that the "one-time performer" will "do a good job"? He needs all the advice and assistance he can get, and the association is better fitted to render such help than almost any other institution. Even if a home builder is lucky enough to have none but honest and scrupulous contractors working for him, there are so many little details about which it is simply impossible to be fully informed, to say nothing of the big and important items, that an efficient secretary looking after these matters, which are regular routine to him for the protection of the association, will thereby see that the owner is protected. The great desirability of the borrower carrying life insurance enough to pay off the loan in case of his death is properly stressed. It not only relieves the association from taking over the property, but it gives the widow a domicile free of debt, and makes that much easier a struggle which is too often a severe one.

In the chapters on general financial

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policy there is timely warning as to the necessity of accurate knowledge of the business and the effects of such things as premiums, fines, fees, and forfeitures. Too often these may appear out of an apparently clear sky to startle, if not embarrass, the one on whom they descend. If any financing organization in the world is called upon to be open and above-board actually as well as by intention, it is the building and loan association. That they are generally so is evidenced by their rapid growth, relatively few failures, and the almost universally high esteem in which they are held.

The chapter on making the loan is so clear and comprehensive that it might well be read by every one who borrows or lends. While dealers in securities are supposed to be fully informed and to handle only safe paper, it can do no harm for the purchaser or the maker to know as much as he can about the details. The discussion with respect to the title and abstract, the various parts of a mortgage, and the difference between the latter and a trust deed is wisely included.

The chapters on the technical handling of the office and office records should prove valuable not only to newly organized associations, but also to those which have grown to such a size that their methods are cumbersome and need simplification and efficiency. The forms and models given appear to be taken from actual cases; in fact, the book as a whole is strictly in line with modern practice in basing discussions on actual cases in a great many matters. Such things as the "explained balance-sheet" of the Danville, Illinois, association cannot help being of great assistance to people unfamiliar with accounting practice but who desire to know how "our association" is handling

"our" money. The suggestion that a complete system of uniform accounts is desirable is most timely. What with the uniform accounts of the steam railways and several classes of other public utilities, and the plans of the Division of Simplified Practice, United States Department of Commerce, to unify as well as simplify business forms in the interest of economy and efficiency, the building and loan associations cannot adopt a standard set of books any too soon. Conservatism in financing should not be allowed to obscure progressive improvements in technique.

It is implied that the supply and demand curves are for the information of those already familiar with such graphs. Nevertheless a little more complete diagrams and a little fuller information might have made them familiar to practically every reader.

The discussion covering regulation, laws, and taxation reveals how little real attention has been given to these associations. That despite this inattention the associations have generally prospered and suffered infinitesimal losses is one more tribute to the high character of the leaders of the movement. The authors have been most painstaking in their search after these matters, and the numerous tables reveal an enormous amount of labor in securing and compiling data in such convenient forms.

If any one questions the importance of building and loan institutions on account of the small space they occupy in the press and in public discussion, the figures given in Chapter XXIII should promptly dispel all doubt. An institution with over seven million members and with assets of about four billions of dollars is a weighty and respectable member of our social and financial groups. The United States is one of



the youngest nations, characterized by a rate of growth and development unparalleled in world history. We are still moving forward at tremendous speed and new problems constantly confront us. Not the least of these is the question of housing our rapidly increasing population, and very close to this is the problem of maintaining our American standards of living. The building and loan association is second to none in helping to answer these two questions, and this book is a distinctive contribution to the somewhat meager stock of information previously available.

A. W. JAMISON

Gordon, William G., and Lockwood, Jeremiah. *MODERN ACCOUNTING SYSTEMS*. New York: John Wiley and Sons, 1924. pp. x, 464. \$4 net.

THIS volume on accounting systems represents something of a departure from the usual in books on accounting. In recognition of the importance to the accountant of an understanding of the business or industry with which he is concerned, the authors have in this volume introduced generous chapters describing the nature, purposes, functions, organization, and problems of each class of undertaking discussed. The authors justify this procedure by considering the knowledge of the industry as the materials with which the accountant works. A knowledge of accounting principles, it is assumed, is essential to the practice of accounting, but, state the authors, "these tools are useless if there is no material to which they can be applied."

Not all types of business or industrial accounting systems are analyzed. In this volume only certain industries are taken as representing the accounting problems of the particular classes of

undertakings. These are then treated in detail to bring out the peculiarities of the accounting system necessary for the particular class of business or industry under survey. The various systems are analyzed in the order of their increasing complexity. As representative of financial institutions, which (depending as they do largely upon the use of a cash book) represent the simplest form of accounting from the standpoint of the books required, the authors devote Part II of the book to building and loan associations, Part III to insurance companies, Part IV to banks, and Part V to stock brokerage.

With the discussion of stock brokerage accounting in Part V, the dividing line between accounting for financial institutions and for merchandising undertakings is reached—for the stock broker divides his accounting system into two parts, in the first of which he records cash transactions, and in the second, security transactions.

In Part VI the department store is selected as representative of the accounting problem of all merchandising undertakings in which the accounting system must provide for three divisions, (1) the recording of merchandise purchases, (2) the recording of merchandise sales, and (3) the recording of cash receipts and disbursements.

The fact that, in manufacturing, the production of the finished article is the main purpose of the business organization makes for further necessary modification in the accounting system. "Labor is applied to the material and the result is a finished product which is sold to the jobber, the retailer, or, in some instances, direct to the consumer. The accounting system of a manufacturing business consists, therefore, not only in the accounting for sales, and the receipts and disbursements of money, but on the

purchase side it must provide a proper accounting for elements entering into the cost of the finished product—material, labor, and indirect expenses. For the reason that a company engaged in the production of gas for heating and lighting purposes furnishes a good illustration of the manufacturing processes involved, and in its accounts must conform with the requirements prescribed by public service commissions, gas companies have been selected as best suited for study" (Part VII).

The railroads are taken as a second illustration of utility industries and are given detailed attention in Part VIII, particularly because control by the Interstate Commerce Commission has given rise to a uniform classification of accounts and to uniform statements.

Up to this point in the discussion of accounting systems the organizations used to illustrate the necessary variety in systems have all been selected from those organized for profit. In the final section (Part IX) of the book, the public accounting group is analyzed. Public accounting, since it centers around a budget, demands marked variations in the system used. The accounting system of the municipality, which has reached a high stage of development in many instances, is selected to represent this group.

The volume is carefully indexed and should prove useful in aiding the accountant and the business man to apply the general principles of accounting to the peculiar problems of their organizations.

HERBERT B. DORAU

Berridge, William A., Winslow, Emma A., and Flinn, Richard A. *PURCHASING POWER OF THE CONSUMER: A STATISTICAL INDEX*. Chicago: A. W. Shaw Company, 1925. pp. xxv, 318. \$4.

IN 1922 the J. Walter Thompson

Company of New York, interested in the development of new methods to measure the buying capacity of consumers, offered three prizes for essays on the subject of "A Statistical Index of the Purchasing Power of Consumers in the United States." The three best essays which received the awards are published together in this volume.

An examination of the essays brings out two outstanding characteristics with respect to the statistical treatment of the subject. In the first place, it shows how one may try to accomplish the same end in statistics by using different methods as well as different kinds of data. The purpose of each essay is to work out an index which would enable one to forecast the future demand of consumers for goods. Yet one author tries to accomplish this end by means of an index of real earnings, another through budget studies, and a third by an employment index. In the second place, one is amazed at the lack of adequate data on the subject as well as the lack of coordination among the existing data. This makes the task for the writers very difficult.

The first essay is "An Index of the Incomes of Factory Workers in the United States," by Professor Berridge. This index is based on monthly data giving the total pay-roll expenditures for one week of each month in representative factories. The index covers the period from 1919 to 1924. Separate indexes are first computed for certain individual industries as well as groups of industries, but these are later combined into a general index of factory workers' wages. Finally, Professor Berridge computes an index of real earnings by dividing his general index of wages by an index of the cost of living.

Professor Berridge's index is subject

to many limitations. In the first place, it is based only on factory workers' earnings and does not cover other industries, such as building, railways, and mercantile establishments. In the second place, it covers only part of the United States and leaves out many important industrial areas. Finally, no attempt is made to work out indexes of real wages by industries and localities, which would be very useful in estimating the purchasing power of consumers. Professor Berridge, however, is not to blame for these limitations, as he was constantly faced by lack of adequate data. His work is an excellent beginning and should be followed up.

The second essay, which is entitled "Contributions from Budget Studies to the Construction of a Statistical Index of the Purchasing Power of Consumers in the United States," is by Emma Winslow. This essay gives a careful analysis of the various budget studies conducted in America and in foreign countries with reference to methods used and results obtained. The author points out how the information disclosed by these budget studies could be used to estimate the purchasing power of consumers for certain groups of commodities. Some valuable suggestions are made with reference to the improvement of budget investigations.

In the third essay, which was contributed by Richard A. Flinn, the author attempts to show that "the most useful statistical index of the purchasing power of consumers in the United States may be obtained by showing changes in the number of workers seeking employment for each 100 persons called for by employers through the State (or Federal) Public Employment Offices." Timeliness is claimed to constitute the chief virtue of this index, which is considered

as the most important element in an index designed to forecast consumers' demand. It is true that changes in employment do anticipate changes in wages or in the purchasing power of workers, but an index of the ratio of workers looking for employment for each 100 places open is hardly an adequate index of employment. Such an index is based on the operations of government employment offices, which, unfortunately, are as yet too few in number and cover only a few classes of workers, largely clerical, domestic, and unskilled workers.

J. PERLMAN

Smith, J. Russell. *NORTH AMERICA. New York: Harcourt, Brace and Company, 1925. pp. vii, 811. \$6.*

THIS very recent and delightful addition to the reference books on North America starts off with a vigorous statement of the main problem which the author sets himself to answer: "How does the continent of North America influence man as he makes his living and lives his life upon it?" The first step in solving the problem is to undermine the old settled ideas that man is as he is in North America because of the inherent qualities of the people and the inherent virtues of our particular form of government. After two chapters devoted to proving the fallacy of these theories, the real problem is attacked. The continent of North America is divided into 45 regions on the basis of their leading, dominant, or common interests and their important surplus commodities.

The regions are outlined on a colored map of the continent on a scale of 200 miles to the inch. The map is conveniently placed in a pocket on the inside of the back cover of the book. Each one of the 45 regions is treated in a

chapter of its own in which the author, in a lively, interesting style, shows that the surface, climate, natural resources, and accessibility of the region are responsible for the dominant interests of the people and their economic and social development. The task of wading through over 700 pages of this regional treatment seems appalling when one begins the book, but the text is so chatty, interesting, and in some places so startling and unusual that one reads on and on with keen pleasure and interest.

Over 400 pictures, maps, charts, and graphs are used to good advantage. The legends and captions accompanying the illustrations are as unique as the text. Over 80 of these illustrations were obtained from the United States Department of Agriculture and represent the latest and most complete data obtained through the Department's facilities for research.

It is very likely that the location of the regional boundary lines will excite some controversy among the author's contemporaries, but since Mr. Smith has taken the first plunge in outlining some of these regions and in including the descriptions of them in his textbook, he has the advantage of an early start in any discussion that may arise.

The author takes for granted, perhaps too much for granted, that his reader has a thorough grounding in the principles of physiography and in dynamic geology. His use of terms and some of his generalizations may be open to discussion; for instance, he refers frequently to *flowing* glaciers. One regrets also that so excellent a piece of work should be marred in a few places by faulty English and careless construction.

On page 226, the statement is made in a footnote that "The Ford Enterprises own 125,000 acres of coal lands

in Kentucky—said to be the largest land holdings of any kind in the South." As a matter of fact, one lumber company with headquarters in Kansas City, Missouri, has classified over 800,000 acres of its southern holdings; another lumber company owns over a million acres in the Ozarks, and the King Ranch in southeastern Texas contains over 1,280,000 acres. Other instances of holdings much larger than those of the Ford Enterprises are on record.

Some of the scanty and sketchy discussions of big subjects, such as the history of the federal policy in disposing of public lands, are misleading and irrelevant to the general plan and purpose of the book and might have been eliminated with no loss to the reader.

Any instructor using the book as a class text will have excellent material for training the students to distinguish between that which is really scientific and essential to the subject and that which is catchy, humorous, or startling and is used only to drive home a point. No doubt the average student will find it easier to remember that the fourth James MacDonald of Prince Edward Island is locally known as "Banker Jimmie's John's Jimmie," (p. 102) than to remember some valuable facts about the region, and it is easy to picture the clever high-school youngster skipping through the book with the skill of a connoisseur and extracting these choice kernels of fun from page and footnote, and discarding or ignoring with equal skill the dry husks of prosy information.

In the chapters on the Pan-American regions of North America, Mr. Smith has gone out of his way to discuss the marital relations of the people and, perhaps unintentionally, gives the impression that social morals in these regions are not just what they should be. We

are sorry that Mr. Smith has added his quota to the grievances which the Spanish-Americans have against us as a nation. This discussion is not germane to the main idea of the book and leaves one with an unpleasant taste.

The general make-up of the book, however, is pleasing. It is printed in clear type on good paper and the illus-

trations are clean cut and well arranged.

The book represents an immense amount of travel, study, and hard work, and Mr. Smith is to be congratulated on its timely appearance. It is a welcome addition to our Americana, and we feel that it deserves a wide-spread distribution.

B. HENDERSON

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## SUMMARIES OF RESEARCH

### PUBLIC UTILITY FINANCING DURING SECOND QUARTER, 1925

THE volume of public utility securities issued during the second quarter of 1925 was substantially below that of the first quarter of the year.<sup>1</sup> It should be noted (Table I) that the first quarter is normally characterized by a larger volume of securities issued, and, moreover, that the first quarter of 1925 was exceptional, having the largest issue in the period from 1919 to 1925. The volume of new public utility security issues during the second quarter of 1925 was, however, exceeded in the corresponding periods of 1924 and

1922 when the index of volume (Table I) was 271 and 172, respectively. Examination of the index by months (Table I) shows the decline to have occurred during the months of April and May (1925), for in June, the last month of the quarter, the volume for the month rose to an index of 118, exceeded only in June, 1924.

<sup>1</sup>For the original study of which this note is the first of a continuing series to keep up to date the index of volume of public utility financing, see "Public Utility Financing, 1919-1925," by Herbert B. Dorau, *JOURNAL OF LAND & PUBLIC UTILITY ECONOMICS*, July, 1925.

TABLE I. INDEX NUMBER OF VOLUME OF PUBLIC UTILITY FINANCING, 1919-1925\*

	1919	1920	1921	1922	1923	1924	1925
By Months							
January.....	100	67	55	46	122	112	199
February.....	48	28	25	47	66	89	172
March.....	25	27	25	43	94	78	144
April.....	5	38	25	50	64	112	69
May.....	15	38	35	150	66	233	103
June.....	26	20	9	96	92	122	118
July.....	41	25	115	44	21	104	...
August.....	20	11	33	22	40	62	...
September.....	54	44	34	147	34	77	...
October.....	24	33	33	77	59	112	...
November.....	8	21	119	43	161	69	...
December.....	20	63	53	54	135	111	...
By Quarters							
First Quarter.....	100	71	61	80	164	162	299
Second Quarter.....	27	56	41	172	129	271	168
Third Quarter.....	67	47	105	123	55	141	...
Fourth Quarter.....	30	68	119	101	206	169	...
By Years.....	100	107	145	212	246	330	...

\* Volume for January, 1919, first quarter, 1919, and year 1919 used as basis for computing index numbers for months, quarters, and years, respectively. Compiled from the records of the *Commercial and Financial Chronicle*.

TABLE II. WEIGHTED AND SIMPLE AVERAGE YIELD AT OFFERING PRICE OF  
NEW PUBLIC UTILITY SECURITY ISSUES, 1919-1925\*

THE YEARS 1919-1925	ALL MATURITIES†		LONG TERM		SHORT TERM‡	
	Weighted Average Yield	Simple Average Yield	Weighted Average Yield	Simple Average Yield	Weighted Average Yield	Simple Average Yield
The Year 1919.....	6.55	6.68	6.21	6.25	6.78	7.03
First Quarter.....	6.49	6.68	6.22	6.21	6.75	7.21
Second Quarter.....	6.63	6.70	6.29	6.33	6.86	6.99
Third Quarter.....	6.40	6.58	6.12	6.28	6.54	6.82
Fourth Quarter.....	6.70	6.78	6.27	6.24	7.20	7.05
The Year 1920.....	7.55	7.64	7.52	7.59	7.59	7.68
First Quarter.....	7.14	7.16	6.75	6.64	7.27	7.34
Second Quarter.....	7.57	7.69	7.40	7.58	7.64	7.72
Third Quarter.....	7.70	7.87	7.61	7.75	8.21	8.12
Fourth Quarter.....	7.88	7.94	7.77	7.84	8.15	8.29
The Year 1921.....	7.13	7.47	7.11	7.42	7.27	7.66
First Quarter.....	7.62	7.75	7.54	7.63	7.87	8.02
Second Quarter.....	7.62	7.63	7.58	7.62	8.05	7.65
Third Quarter.....	7.34	7.53	7.28	7.46	7.90	7.89
Fourth Quarter.....	6.56	7.02	6.59	7.03	6.35	6.95
The Year 1922.....	6.06	6.34	6.03	6.32	6.39	6.53
First Quarter.....	6.46	6.72	6.57	6.75	5.89	6.40
Second Quarter.....	6.00	6.33	5.98	6.27	6.76	6.96
Third Quarter.....	6.05	6.23	5.98	6.16	6.80	6.89
Fourth Quarter.....	5.83	5.99	5.80	6.04	6.60	5.50
The Year 1923.....	6.04	6.31	5.99	6.26	6.73	6.72
First Quarter.....	5.88	6.19	5.86	6.17	6.39	6.36
Second Quarter.....	6.11	6.27	6.02	6.20	6.85	6.65
Third Quarter.....	6.35	6.49	6.25	6.36	7.16	7.11
Fourth Quarter.....	6.01	6.36	5.98	6.32	6.52	6.67
The Year 1924.....	6.03	6.14	6.04	6.16	5.97	6.04
First Quarter.....	6.08	6.20	6.04	6.20	6.25	6.23
Second Quarter.....	6.10	6.23	6.15	6.28	5.86	5.94
Third Quarter.....	6.14	6.16	6.17	6.19	5.72	5.96
Fourth Quarter.....	5.81	5.96	5.82	5.95	5.78	5.99
The Year 1925.....						
First Quarter.....	5.49	5.81	5.67	5.82	5.32	5.77
Second Quarter.....	5.72	5.87	5.74	5.86	5.58	5.94

\*Compiled from the records of the *Commercial and Financial Chronicle*.

†Including all classes of interest-bearing obligations; that is, bonds, notes, debentures, and certificates. The yield is computed on offering price to maturity.

‡"Short term" includes all maturities of 1-5 years inclusive; "Long term" all issues for longer than five years.

Financing during the second quarter of 1925 was at slightly higher average interest yield at offering price. All public utility interest-bearing obligations of all maturities were offered at a price to yield the investor an average rate of interest per dollar of 5.72% and at an average rate per issue of 5.87%

(Table II). Excluding debentures and certificates from the average, bonds and notes of all maturities were offered to yield an average of 5.65% per dollar and 5.82% per issue. Comparable averages for the first quarter of 1925 were 5.48% and 5.79%, respectively.

HERBERT B. DORAU

## OBJECTIVES AND SCOPE OF RESEARCH IN FARM TENANCY

IN a former article in the JOURNAL it was pointed out that the American system of farm tenure was determined largely by the "agricultural ladder," that is, by the ascent of farmers from the status of propertyless laborers to unencumbered ownership of a farm. Ultimately the farm owner retires and in many cases becomes the landlord of the tenant still on the "agricultural ladder." Since so many of our farmers have been farm laborers, tenants, mortgaged owners, and debt-free owners in succession, those steps are a picture of American farm tenure. This picture also shows us the method of transferring farm property from one generation to another.

### *The Agricultural Ladder*

Tenancy, although given almost all the attention by agricultural economists, is therefore only a part of the subject of farm tenure and ownership. Many of the imperfections of rural life are laid to the tenant-landlord system. There is no object in glossing over the soil mining, the instability of rural life and institutions, and the friction between landlord and tenant, but the agricultural laborer and the mortgaged owner must also come in for their share of attention. The goal of the agricultural

ladder is the owner-operator; therefore, it is important that the ladder to ownership be made as efficient as possible. At present, under most circumstances, the tenant step is one of the most efficient ones the young farmer can take. The object, therefore, is not to abolish it altogether, but to make it as effective as possible.

The Institute for Research in Land Economics and Public Utilities has undertaken a study of farm tenure and ownership, the main purpose of which is to examine the "agricultural ladder," to see if the road to ownership cannot be made easier. It is cooperating with the Fairway Farms Corporation, which has under its control nine farms which are now being sold to young farmers on a "tenant-purchase" contract with the idea of helping these men to acquire farms. This general study is being conducted partly to gain additional information to guide the corporation in its endeavors in this direction.

### *Study of Typical Tenancy Regions*

It is necessary, therefore, to examine all the factors which determine the farm-tenure systems of America and foreign countries. Among certain nationalities and races in the United States the proportion of farm tenants has been

found to be very high; among others it is very low. The explanation here is at least partly racial and the solution is not so much economic as sociological.

It has also been observed that tenancy correlates closely with certain crops. The percentage is high where cotton, rice, tobacco, and cereals are grown and generally low in poultry, fruit, and dairy sections. Regions of high land values usually have a high proportion of farm tenants. Naturally, the agricultural ladder takes different forms in these various regions. This necessitates field studies in order to get the facts which explain local differences.

One of the field studies will be made in a region of fairly high land values, a dairy section of Wisconsin where there is less than 3% of tenancy. The object here is to learn how the goal of farm ownership is reached without the tenant step in the "ladder." How are the farms passed from one generation to another in this area? Is the progress as rapid as in areas where farmers become tenants for a while? Has this region a stable rural population? What credit facilities are at hand to help young farmers?

In direct contrast to this area of almost 100% owner operation another region will be chosen where the proportion of tenants is very high. The research here will try to answer the same questions as in the case of the Wisconsin area, but will also try to ascertain the social effects of tenant agriculture and the relation of landlord and tenant. Every system of tenancy involves both a landlord as well as a tenant; curiously enough, most of the studies have been centered on the latter. The functions and responsibilities of the former have not been considered, or else European landlordship has been mentally transplanted into American conditions with-

out examining our own historical development and situation.

### *Tenancy in Foreign Countries*

For this reason it is essential to examine foreign tenure from the American standpoint. It seems that the agricultural ladder is an American institution. In Europe agricultural laborers tend to remain laborers, and tenants do not become owners to any extent. If this is true, care must be taken in comparing the percentage of tenancy of the United States with that of European countries. Some of them have gone far in abolishing tenancy. Has this been successful? What means were used? Can they be applied in America? Where there is a permanent system of tenancy as in England, what legislation has been evolved to stabilize the system? How can this legislation be modified to apply to America?

The study of foreign conditions also involves the examination of other new countries, such as Canada, Argentina, Australia, New Zealand, and South Africa. All of these began with "free land" as did the United States. Has tenancy been developed there as in the United States? If not, what conditions, what legislation has directed their course into another system of tenure? All this will throw light upon the course of action to be pursued in America.

### *Tenancy and Ownership Problems Interrelated*

In the area of high percentage of tenancy mentioned above, the landlord-tenant relations are especially important. Two phases of this subject merit particular emphasis—the relationship of the retired farmer-landlord to his tenant and the farm, and the relationship of the large-estate landowner to his tenants.

How are farmers climbing the agricultural ladder here? Which of the two types is more helpful? What is being done to retain or restore the fertility of the soil?

Finally, land tenure involves the ownership of land. Hence, research in farm tenancy must inevitably be concerned with the ownership of agricultural land, whether potentially good for farming or already in farms. In this part of the study attention is being directed especially to the large land holdings, concentration of ownership in farm land, and the changing size of the economic unit in agriculture.

The various projects outlined above by no means cover the field of farm ten-

ure and ownership, but they are phases of the general problem which have been inadequately considered in the past. However, it should be remembered that, like other land problems, tenure is not a static thing; facts and conditions alter, and present trends change direction. In a rapidly developing country such as ours, the present findings will be more or less antiquated in five years. Hence, this must be made a continuous piece of research. The time is coming when custom in land tenure (the only guide we have so far) must ripen into legislation, and such legislation must be based upon knowledge of facts and not preconceived notions or prejudices.

GEORGE S. WEHRWEIN



# COMMENTS ON LEGISLATION AND COURT DECISIONS

## ENGLISH HOUSING LEGISLATION

THE housing industry in England is in a thoroughly unbalanced and paradoxical situation. There is a shortage of workingmen's housing and considerable unemployment. Furthermore, organized labor in the building guilds has assumed some of the functions of management, become both employer and employed, as it were. From the political standpoint, a governmental policy of rent control exists side by side with a policy of governmental subsidy. In the same connection, conservative and labor governments alike have adhered to the opposite policies of control and subsidy. The development of these economic paradoxes is of highly practical interest to other countries, for English experience in the field of controlled housing is probably more varied and complete than that of any other country.

Much has been written on some phases of the situation, particularly from the private point of view. The building guilds, for example, have been given publicity in an amount probably not altogether merited by their success in operation. Public policies, on the other hand, have been on the whole either neglected or casually mentioned. For this reason the following summary is offered.

### *Background of Present Difficulties*

It would be superfluous to detail the economic background of these housing conditions. Not only is it well known, but it is very similar in many respects

to the experience of other countries. It will be sufficient to sketch the picture in broad strokes.

In Great Britain, as elsewhere, the shortage of housing facilities was suddenly made acute by the disruption of industry and the rearrangement of economic life made necessary by the outbreak of the war. The flow of productive energies in peace-time was naturally altered to meet war demands, and peace-time building construction was largely given up.

Even before the war, the supply of workingmen's houses was abnormally inadequate to meet the needs of the workers in England's many growing industries. This pre-war shortage has been partly attributed by observers of different political affiliations to Lloyd George's land-taxation scheme of 1909. Lloyd George apparently thought the housing problem could be corrected by eliminating the landlords' practice of holding land out of use for the sake of an anticipated increment in value. The effect of his proposal to tax increments in land values was not what had been expected, and in reality the measure was a serious hindrance to the building industry. The building public lost confidence and feared to start new projects. The sponsors of the tax lost sight of the fact that the price of land is but a comparatively small part of the total cost in every building operation, and also of the fact that if present economic incentives are not strong enough to induce building in certain cases, people could scarcely be induced to utilize

higher-priced lands while expected rewards remain the same. The war disturbances, therefore, merely aggravated a housing situation that was already abnormal.

### *Housing Legislation during the War*

In 1915 the government had to give attention to the problem. Under the circumstances existing at that time, it was out of the question to build more houses, so the government took what seemed to be the only alternative and began to control landlord and tenant relationships and to regulate rents in the hope of protecting necessitous renters during the shortage. The control movement was started with the first of the rent and mortgage interest restriction acts, on December 23, 1915. By this legislation the standard rent was considered to be that of August 3, 1914, and all increases above the standard from December 25, 1915, until six months after the war were made irrecoverable by landlords. Exceptions were allowed, however, in cases where repairs and improvements had been made after the declaration of war, and where taxes that were really chargeable to house occupation had increased. In these cases, slight increases in the standard rent were permitted. Upon payment of the agreed rent and upon performance of other ordinary conditions, no evictions were to be permitted except for waste, nuisance, annoyance, or the requirement by the landlord of the premises for his own use or for the use of some one in his employ. Landlords were, in a measure, protected by the stipulation that, so long as interest was paid and the equity in the property not impaired through lack of maintenance, mortgages were not to be called in.

### *Post-War Legislation*

The legislation of 1920 relaxed somewhat the provisions of the earlier acts and permitted a gradual increase in rents during a three-year period. The Chamberlain Act of 1923 provided for the continuance of restriction until June, 1925. Under this act rents were limited to 40% above the pre-war level, houses becoming vacant passed out of public control, and landlords might obtain possession of houses which they required for themselves, their children, dependents, and employees if they owned the properties before June, 1922. The act also provided that after June, 1925, county courts, with the assistance of reference commissions established by the Ministry of Health, were to serve as buffers between landlords and tenants in rent and ejection cases. These powers were given to the county courts until June, 1925, unless sooner revoked by Parliament.

In 1925 Parliament extended the Increase of Rent and Mortgage Restrictions Act of 1920 to December 25, 1927. Also Part II of the Rent and Mortgage Restrictions Act of 1923 was continued in force for five years after the expiration of the 1920 act.

In the Chamberlain Act of 1923 the government offset the rent restrictions by adopting a new policy of subsidy. The authorized state contribution was £6 a year for 20 years to local authorities for any house built with a superficial area not greater than 850 square feet. Local authorities were also empowered to remit the whole or part of the rates on new buildings and to help workingmen with credit to become home-owners. The Wheatley Act of 1924 increased the subsidy for the building of workingmen's houses from £6 to £9 per house each year for 40 years

with the object of securing an increased supply of labor in the building trades.<sup>1</sup> The 1924 act also extended the operation of the subsidy provisions of 1923 to houses completed before October 1, 1939, instead of 1925 and 1926 as in the 1923 act.

### *Effect of Rent Control*

Rent control did not result in building a sufficient number of new houses of the type most needed. Private house building for working-class renters was greatly curtailed. The speculative builder sought to supply the demand for better-class houses for immediate purchase because they were more profitable.

Statistics of the effect of the subsidies in the 1923 act are available to April, 1924. On that date the Ministry of Health reported that 41,859 houses were to be built under approved schemes of local authorities, 73,777 houses by financially assisted private enterprise, and 5,681 by public utility societies and others similarly assisted. This made a total of 121,317 houses attributable to the subsidy provisions; at the time of the report 8,140 of these were completed and 30,405 were under construction.

On the other hand, unaided private enterprise was known by the Minister of Health to have provided, during the year, 67,546 houses, with 37,953 under construction. Of the 67,546 entered on the rate-books during the year, "49,439 were of ratable value not exceeding £26 a year."

More recent estimates are to the effect that approximately 225,000 houses have been built under state-assisted schemes of all kinds. The inadequacy

of such a program is apparent from the rough estimates that a yearly construction of 250,000 houses is necessary to meet and relieve gradually the shortage.

Today the lack of homes in Great Britain is apparently as great as ever. The slum districts in London and elsewhere, which should have been wiped out long ago, are filled, and there is general overcrowding of workingmen and their families in all the industrial centers. For instance, in Manchester a 4-room tenement is let to 4 families aggregating 19 persons, 7 of whom live in the parlor.

Naturally with such a housing shortage, rent troubles are still prevalent. The city of Clydebank was recently the scene of a virtual crisis. In one week last autumn seven eviction decrees were issued. Six of the ejected tenants were reinstated by a "vigilance committee" composed of citizens. The town council refused to advise tenants to pay rent and arrears even when they were in a position to pay. On the other hand, eviction of unreasonable tenants was the only possible resort of house owners. Owners sought the aid of the law, but so strong was the opposition that the sheriff's officers had to make the evictions by stealth, taking the local "vigilance committee" by surprise. The *Nation and Athenaeum*, in commenting thereupon, wrote: "The story is without parallel in the modern annals of this island. The forces of the law work by stealth, the resistance is openly organized and triumphant. That such a state of affairs should possibly be under a democratic constitution is an extraordinary and disconcerting paradox."

It is difficult to see how any other outcome is possible when we consider the nature of the rent-control principle. The fundamental purpose of rent control is to keep within bounds the charges for

<sup>1</sup> Labor troubles, especially the lack of skilled workers and apprentices, have been a large factor in retarding house construction.

housing space, and these bounds are determined by equitable rather than market considerations. But when rentals are thus restricted, inevitably the returns on housing investments are affected, and such investments become unpopular. This, indeed, has been the cumulative effect of the various rent and mortgage restrictions. Furthermore, the war opened up new and attractive channels of investment to that part of the public which previously put its money into bricks and mortar to let to workingmen. One point of view of investors is illustrated by the following words of one irate landlord, spoken in the spring of 1924: "Who outside a lunatic asylum would invest a penny in any form of house property to let? Who will ever do so again, with the prospect of a Socialist Party bribing the electorate to vote for them on the promise that if they do so they shall obtain houses and flats at about half their market price?"

#### *Effect of Housing Subsidy*

A housing subsidy tends to counteract the effect of rent control. This apparently was the theory of the Chamberlain Act. It was judged from the conditions at that time that neither controlling rents nor giving free scope to the law of supply and demand would meet the situation. Even today building costs are about three times the pre-war level, while the wages of a majority of those who need houses are little more than before the war. But houses had to be provided without waiting until the law of supply and demand could function properly. The only thing that could be done was to build houses anyway. This is the present policy of the government under the Chamberlain and Wheatley acts and their extensions.

In the meantime investigations are being carried on by a committee looking into the possibilities of less expensive materials and processes of bricklaying and plastering. Some of these new types of houses are being tried. The aim seems to be to develop a type of house which can be built by relatively unskilled workmen, consisting of the unemployed in other industries. Along this line a rather interesting scheme for supplying emergency houses was proposed by Lord Weir. His plan was to build "steel" houses by engineering methods, using quantity production and bringing a new labor element into the house-building industry. The unemployed men of the engineering and shipbuilding trade formed the labor reservoir upon which Lord Weir drew to build his houses. On this basis, then, it was estimated that a Weir house, including drains, sewers, and roads, cost about £462. However, a saving of unemployed benefits was estimated at £75 per house by the use of the unemployed of the engineering and shipbuilding trade.

#### *Policy of the Present Government*

As yet the government has not definitely adopted any of the new house types which have been suggested and tried. No new policy has been formulated, but the Chamberlain and Wheatley acts have been continued. The seriousness of the whole matter as seen by some Englishmen themselves is well brought out in a recent editorial in the *Spectator*: "Even if we find the expense of getting out of the slough into which Mr. Lloyd George led us by his land proposals (for that is the original fount of trouble) an appalling burden, we shall get into far worse financial difficulties through attempting to live upon



such nostrums as Rent Restriction Acts. A housing commission is needed for action, not for talk. . . . Filling the country with the so-called 'hideous' emergency houses is better than letting the country remain filled with horrible slums or with houses crowded to such an extent that life in them becomes a torment—it is better than submitting to so grave a shortage of comfortable houses that the young people cannot marry. If we do not get the people of this country properly housed, we shall soon have conditions here which not merely cause, but justify, revolution."

### Conclusion

If the story of British housing troubles has a moral, it is the difficulty of adjusting public control to private enterprise. It may be granted that rent restriction was the only step that could be taken in the war emergency to safeguard reasonable rights of tenants. The error lay in counting too confidently upon rent restriction as a sole remedy for the housing shortage. This policy has been kept so long that public opinion now tends to regard it as a sort of vested right which may not be taken away from the renting public.

The results of this policy were cumulative and twofold. In the first place, strict and continued rent control made it economically impossible for private endeavor to continue to supply homes for workingmen renters. Rents have been limited to about 40% above the pre-war level. Thus, inasmuch as the general price level has been considerably higher—recently about 80% above the pre-war level—rents in terms of real value have suffered a serious decline. Furthermore, greatly increased building costs, set over against but a slightly increased rent-paying capacity on the part

of the workingmen, have added to the difficulty of the situation. In the second place, in so far as the government's restriction policy eliminated private building it accentuated the housing shortage, and made necessary the paradoxical addition of a subsidy.

In principle a housing subsidy softens the effects of rigid rent control. In contrast with rent restriction it may be described as a compensatory policy. Theoretically, when rent control takes away too much of the inducement to private building, a subsidy becomes necessary to restore the inducement to effectiveness. It cannot be doubted that a subsidy of any kind in England is extremely burdensome at the present time when taxes are so high. But to the governing authorities a subsidy seemed better than an aggravated housing shortage.

It is an open question, for which there is no satisfactory answer, whether rent control could have been relaxed sooner. Probably rent "decontrol" would have resulted in serious injustices to workingmen, which at the time seemed worse than the unhealthy congestion resulting from the intensified shortage.

At the present time two facts stand out in the minds of observers: (1) Private enterprise alone cannot meet the existing need for low-priced housing; (2) complete rent "decontrol" is politically out of the question. In view of these facts the housing subsidy must inevitably be continued.

However, there are at least three ways of looking at subsidies: (1) A form of charity to relieve distress; (2) a first step in the direction of public housing; (3) a device for revivifying private enterprise. Unless the government intends to provide all housing as a public function, a policy which has serious economic disadvantages, the sub-

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sidies should be so administered as to encourage private enterprise to reestablish itself. This may require years to accomplish, and it certainly will require all the energy and good-will of the different interested groups. As private building is revitalized, it may become possible to relax rent control.

The outlook is admittedly dismal, but not hopeless. A policy of subsidizing at the present time seems necessary and desirable, despite its apparent conflict

with the policy of rent control. The effects of each policy should be clearly thought out in order that administratively each may find its proper place. To the present writer the subsidy seems desirable not so much as a measure of charitable relief or as a foothold for complete public provision of housing, but as a means of encouraging private enterprise and gradually relaxing rent control.

MARCUS WHITMAN

## LEGISLATION AGAINST THE ORIENTAL FARMER

THE decisions of the Supreme Court of the United States in November, 1923, granted to the residents of the Pacific Coast nearly everything for which they have fought in keeping certain aliens from owning land. These decisions upheld the validity of the restrictions upon the ownership and leasing of farm lands by aliens as imposed by the laws of Washington and California. Four cases were appealed to the Supreme Court; one Washington case involved leasing and three California cases involved leasing, "cropping," and the sale of stock in corporations owning land.<sup>1</sup>

### *Background of These Laws*

It is impossible to understand the

existence of these laws without knowledge of the conditions which led to their passage. The first Orientals to come to this country in numbers to prove at all alarming were the Chinese. This situation was effectively taken care of by the Chinese Exclusion Act of 1882. Since that time the number of Chinese in the states on the Pacific Coast has materially decreased and the number of Japanese has become the acute problem. In addition to the Chinese and Japanese, there are also a few "low-caste" Hindus. These are considered the least desirable of all the Orientals, but their number is insufficient to cause special concern.<sup>2</sup>

Thus the land laws of the Pacific states are an attempt to solve in some degree the Japanese problem. The

<sup>1</sup> These cases are: *Terrace v. Thompson*, 44 Sup. Ct. 15 (1923) (Washington case); *Porterfield v. Webb*, 44 Sup. Ct. 21 (1923); *Webb v. O'Brien*, 44 Sup. Ct. 112 (1923); *Frick v. Webb*, 44 Sup. Ct. 115 (1923). See also *Cockrill v. People of State of California*, 45 Sup. Ct. 490 (1925).

<sup>2</sup> A brief outline of federal and state legislation bearing upon alien land ownership follows:

1. Federal legislation:

(a) Burlingame Treaty of 1868.

This treaty made between the United States and China recognized the inherent right of peoples to immigrate.

(b) Treaty of 1880.

China recognized the right of the United States to suspend immigration.

(c) Chinese Exclusion Act of 1882.

The Chinese were excluded for a period of 10 years.

(d) Amendment of Chinese Exclusion Act in 1884.

This act forbade the entrance of Chinese, not only from China, but from any foreign port or place.

(e) Scott Law of 1888.

This law prohibited the return to the United States of Chinese laborers who had left the United States.

(f) Geary Law, 1892.

The Geary Law extended the exclusion of Chinese for another 10-year period.

(g) Gentlemen's Agreement, 1907.

This was an agreement between Japan and the United States that passports should be granted only to certain classes of Japanese immigrants by the Japanese Government.

(h) Barred Zone Act, 1917.

This act excluded all other Asiatics except the Japanese.

reasons for the prejudice against the Japanese may be put under three main headings: political, social, and economic. The people in the West, especially in California where 60% to 65% of the Japanese population of the United States lives, feel that the Japanese never really give up their allegiance to the native country and that Japan will use this fact to her own advantage if the occasion or the need arises. As far as the social aspects of the problem are concerned, the Californians do not think the issue is one of racial superiority, but rather of so great a racial difference that assimilation is impossible. This, of course, means that a group distinct and separate from the common life of the state might develop, and this is thought undesirable.

The land laws were designed, however, to deal primarily with the economic situation which has arisen out of the Japanese immigration. Most of the Japanese who come to this country are of peasant stock and have land hunger. Most of them, consequently, do not wish to work for wages but as tenants in some form until they are able to own land. In 1920 the California State Board of Control reported that 16% of the irrigated lands of the state were occupied by Orientals, and that in the past 10 years the number of acres occupied by the Japanese had increased 412%.

Due to the low standards of living of the Japanese and their ability to withstand hardships, the white farmer has found it difficult to compete with them.

The whole family of the Japanese farmer works in the fields. They are able to work in the intense heat of summer and to live with no heat in their houses in winter. They consume less food than the white farmer and work longer hours. Also, because of their short backs they are well adapted to cultivate so-called "knee-crops" which require considerable stooping. Thus the Japanese have gained a practical monopoly on certain crops, such as asparagus, berries, and cantaloupes, and occupy a large percentage of the land in certain sections of the state.<sup>3</sup>

The western states felt that the Gentlemen's Agreement of 1907 made with Japan by President Roosevelt was carried out in the letter rather than in the spirit. Up to February 25, 1920, the Japanese Government issued passports to "picture brides," thus admitting into this country in reality another laborer as well as a potential mother. This the people of the West felt to be an evasion of the spirit of the agreement. Likewise, the practice of issuing passports to blood relations whom the Japanese adopted and brought into the United States as their children was deemed an evasion.

This feeling was aggravated by the lack of interest of the rest of the country, which, however, was only natural, since more than three-fourths of the Japanese in this country congregated in California and Washington. At any rate, the citizens of these states decided they themselves must handle the situation as well as possible.

(Footnote 2 continued from page 106)

- (i) Johnson Bill, 1924.  
Total exclusion of all Orientals.
2. State legislation:
  - (a) Anti-Alien Land Law of California, 1913.  
This law prohibits the owning of land to any one who is ineligible to citizenship and limits the term of land lease to three years.
  - (b) Anti-Alien Initiative Law, 1920.  
This referendum entirely prohibits the privilege of

guardianship to native oriental landowners by alien parents, and also prohibits land leasing.

- (c) Other states with anti-alien land laws: Illinois, Minnesota, Washington, Arizona, Missouri, Oklahoma, Oregon, Idaho, Colorado, Nebraska, Texas, Nevada, New Mexico, Delaware, Kansas, Indiana, Kentucky, Pennsylvania, Louisiana (19 states in all).

<sup>3</sup> See *Report of California State Board of Control, "California and the Oriental,"* pp. 50-51.

*Scope of Legislation*

The California Alien Land Law was passed in 1913. Section 1 of the act states that "all aliens eligible to citizenship under the laws of the United States may acquire, possess, enjoy, transmit, and inherit real property." Section 2. "All aliens other than those mentioned in Section 1 of this act may acquire, possess, enjoy, and transfer real property, or any interest therein in this state, in the manner and to the extent and for the purposes prescribed by any treaty now existing between the Government of the United States and the nation or country of which such alien is a citizen or subject *and not otherwise*,<sup>4</sup> and may in addition thereto lease lands in this state for agricultural purposes for a term not exceeding three years." Section 3 of the act prohibits corporations, the majority of the stock of which is owned by aliens ineligible to citizenship, from owning agricultural land or from leasing lands for agricultural purposes for a term exceeding three years. Section 4 provides that when any real property is to be inherited by ineligible aliens, the court "shall order a sale of the real property and the proceeds of such sale shall be distributed to such heir or devisee in lieu of such real property."

The Californians felt that the Japanese evaded this law. According to Governor Stephens, "These evasions have been accomplished through the medium of corporations, trustee stock ownership, trustee land ownership, and the device of having native infant children of Japanese parentage made grantees of agricultural lands controlled and operated exclusively by their non-eligible parents."<sup>5</sup>

<sup>4</sup> Italics ours.

<sup>5</sup> Report, California Board of Control, p. 12.

Thus the initiative measure to amend the law where it was found to be weak was submitted to the voters November 2, 1920, and received a majority vote of three to one. This additional act prohibits either owning or leasing of farm land by Japanese, the owning of land by American-born Japanese minors if it is held under the guardianship of their parents, or the owning of stock in any company owning real property. The constitutionality of this law was in doubt until the decisions, cited above, were given, but now it seems probable that the law will have the effect that the Californians hoped for the 1913 law.

Washington is the only other state which has the problem in a degree at all comparable to California. The situation in that state has been dealt with in much the same way.

*Results of Alien Land Ownership Legislation*

Two results of the passage of these laws may be expected. Either the Japanese farmer will be reduced to the farm-labor class or, if he is unwilling to accept this status, he will probably go into commercial activities in the cities. About 60,000 Japanese in California who were on a part-crop contract must now discontinue farming altogether or remain in the capacity of wage-earners. The figures for 1920 indicating the different classes of Japanese farmers show a large number in the tenant class.

TABLE I. CLASSES OF JAPANESE FARMERS IN CALIFORNIA AND WASHINGTON, 1920

State	Owners	Managers	Tenants	Total
California . . . .	506	113	4,533	5,152
Washington . . . .	27	5	667	699

No figures are available since the Supreme Court decisions, but we may expect that the tenant group will diminish in size, since leasing is no longer possible. As time goes on the proportion of native-born Japanese will become larger, for the Japanese birth-rate is very high. This group, of course, has all the privileges of any American-born citizen, and the owner group of farm operators may, therefore, be expected to increase after a while. On the other hand, the Japanese who scorn the status of agricultural labor have an alternative in commercial business in cities. The California State Board of Control, in its discussion of the problem, states that "it must be expected that the Oriental, if crowded out of the agricultural field, will rapidly increase his commercial activities. This has been demonstrated in California in the increasing commercial activities of the Chinese, the race of Orientals longest resident in California, and who now

maintain large markets and retail grocery stores, besides operating some very large fruit canneries.

In the hearing before the House Committee on Immigration and Naturalization June 12, 1919, testimony was presented to show that in Seattle on April 1, 1919, 47% of the hotels and about 25% of the grocery concerns were operated by Japanese.<sup>6</sup>

This legislation illustrates how the control of land ownership affects population movements and economic activities. It is too early yet to judge all the social consequences. If the restrictions are fully effective, the probabilities are, however, that, considering the peasant antecedents of the Japanese, a considerable number will remain in the status of permanent agricultural laborers, while the others will drift to cities to take up new occupations.

IRMA BORCHERS

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<sup>6</sup> *Report*, California Board of Control, p. 105.

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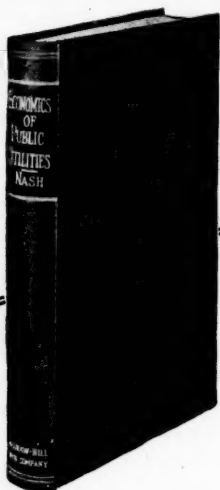
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